BSNL GE-JTO Recruitment Examination
Test Paper - III
1. Of the following bridges the one which can be used for the measurement of dielectric loss of a capacitor is –
a.) Schering bridge
b) Heaviside campbell equal ratio voltage
c) Owen bridge
d) Anderson bridge

2. LBDT is uses as a –
a). Displacement transducer
b) Pressure transducer
c) Temperature
d.) Any of the above

3. Polarization is a measure of -
a.) Dielectric constant per unit volume.
b.)Voltage gradient to produce electrical breakdown
c.) Product of charge and distance
d.)Excess charge density

4. Compared to the inductive type of transducer, capacitive transducer is superior for the measurement of displacement because of -
a.)Absence of non-linearity
b.) High frequency response
c.) Small size
d.) High accuracy

5. An incremental model of a solid state device is one which represents the –
a.) ac property of the device at the desired operating point
b.dc property of the device at all operating points
c.) Complete ac and dc behaviour of the device at all operating points
d.)ac property of the device at all operating points.

6. The ac resistance of a forward biased p-n junction diode operating at a bias voltage 'V' and carrying current 'I' is –
a.)Zero
b.)a constant value independent of Vand I
c.)
d.)

7. A meter is shielded with a soft iron to –
a.)Prevent damage from rough use
b.) Keep moisture out of movement

c.)Protect meter movement from stray magnetic fields
d.) Achieve all of the above

8. A capacitor that has been connected across a battery for comparatively long time becomes–
a.)Charged
b.) Discharged
c.) Short - circuited
d.) Defective

9. The charge on the plates of a capacitor is given by the expression –
a.) Q = VI
b.) Q = IR
c.) Q = CV
d.) Q = IC

10. Silicon steel used for electrical purposes has silicon percentage of –
a.)0.5
b.) 2.5
c.) 3.4
d). None

11. The feature of VTM is its –
a.)Low input impedance
b.)Low power consumbtion
c.)The ability to measure wider ranges of voltage and resistances
d). None

12. In an N-type semiconductor, the position of the fermi level –
a.)Is lower than the centre of the energy gap
b.) Is at the centre of the energy gap
c.)Is higher than the centre of the energy gap
d.)Can be anywhere depending upon the doping concentration

13. A JFET can operate in –
a.) depletion and enhancement model
b.)depletion mode only
c.)enhancement mode only
d.) neither enhancement nor depletion mode

14. Consider the following semiconductor diodes –
a.)Germanium diode
b.)Silicon diode
c.) Tunnel diode

d.) Schottky diode

15. A diode with a PIV of 50V is likely to break down when rectifying 50v ac supply because –
a.) it is made of defective material
b.) it is incorrectly connected to the supply
c.) peak value of ac supply exceeds the PIV value
d. ac supply is of extremely high frequency.

16. The set of transistor characteristics that enables a to be determined directly from the slope is –
a.) CE transfer characteristics
b. CE output characteristics
c.) CB transfer characteristics
d.) CB input characteristics

17. For an N-channel JFET, the drain voltage has to be –
a.) positive with respect to the source
b.) negative with respect to the source
c.) uncharged with respect to the source
d.)none

18. The SCR is often employed as a –
a.)Source-controlled switch
b.)Drain-controlled switch
c.) Gate-controlled switch
d) None

19. An oscilloscope has an input impedance consisting of 1MW and 20pF in parallel. A high impedance probe connected to the input of this oscilloscope has a 10MW series resistance, this 10MW resistance –
a.) Need not be shunted
b.) Should be shunted by a 2pF capacitor
c.) Should be shunted by a 20pF capacitor
d. Should be shunted by a 200pF capacitor

20. Compared to silicon, gallium arsenide (GaAs) has –
a.)Easier to grow crystals since the vapour pressure of arsenic is high
b.)Higher optolectronic conversion efficiency
c.) Both a and b
d). None

21. When the [network](#) shown in the fig draw a current I and if the ends ab are shorted, the current drawn would be –

a.) I
b.) I\ 4
c.) 4 I
d.) 2 I

22. When all the resistances in the circuit are of one ohm each, then the equivalent resistance across the points A and B will be –
a.)1W
b.) 0.5W
c.) 2W
d). 1.5W

23. Of the following periodic waveforms the one having only odd harmonics of sinusoidal waveform is-
a.)1 and 2
b.) 1 and 3
c.)1 and 4
d.)2 and 4

24. When in the network shown in the given fig, the switch K is dosed at t = 0 with the capacitor uncharged then the value for at t = 0+ will be –
a.)100 amp./sec.
b.)–100 amp./sec.
c.)1000 amp./sec.
d.)–1000 amp./sec.
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25. For the circuit shown in the given figure, the voltage VAB is –
a.)6V
b.)10V
c.)25V
d.)40V

26. In the network shown in the given fig. current i = 0 when E = 4V, I = 2A and I = 1A when E = 8V, I = 2A. The Thevenin voltage and the resistance into the terminals AB are –

a.)4V, 2W
b.) 4V, 4W
c.) 8V, 2W
d.) 8V, 4W

27. The effective resistance between the terminals A and B in the circuit shown in the fig. is –

R

a.) R
b.) R-1
c.) R/2
d.) 6/11 R

28. When in a two terminal network, the open circuit voltage measured at the given terminals by an electronic voltmeter is 100V and a short circuit current measured at the same terminals by an ammeter of negligible resistance is 5A then if a resistor of 80W is connected at the same terminal, then the current in the load resistor will be –
a. 1A
b.) 1.25A
c). 6A
d. 6.25A

29. If for the network shown in the following fig. the value of Z(s) is then the value of C and R are respectively –

30. In Faraday's induction phenomenon, a changing magnetic field is accompanied by an electric field. Which of the following equation or equations represents it-

31. The electric potential due to an electric dipole of length L at point distance r away from it will be doubled if the -
a.) Length L of the dipole is doubled
b.) r is doubled
c.) r is halved
d) L is halved

32. When a particular mode is excited in a waveguide there appears an extra electric component in the direction of propogation . The resulting mode is
a.) Longitudinal electric
b.) Transverse electromagnetic
c.) Transverse magnetic
d). Transverse electric

33. When for a transmission line the open circuit and short circuit impedance are 20W and 5 W respectively then the characteristic impedance of the line is -
a.) 100 Ohms
b). 50 Ohms
c.) 25 Ohms
d.) 10 Ohms

34. In an ideal transmission line with matched load, the voltage standing wave ratio and reflection coefficient are respectively -
a.) 1 and 1
b). infinity and 1
c) infinity and 0
d. 1 and 0

35. When an electric charge of 100 coulombs is enclosed in sphere of radius 100 m then the electric displacement density (in coulomb / m2) D is –
a.) 0.0833
b). 0.833
c.) 1.666
d.) 10

36. For the dominant mode in a rectangular wavelength with breadth 10 cm, the guide wavelength for a signal of 2.5 GHz will be -
a.) 12 cm
b.) 15 cm
c.) 18 cm
d.) 20 cm

37. When the phase velocity of an electromagnetic waves depends on frequency in any medium, the phenomenon is called-
a.) Scattering
b.)Polarization
c.) Absorption
d.) Dispersion

38. Antennas commonly used for microwave links are -
a.) Loop antenna
b.) Log-periodic antennas
c.) Paraboloidal dishes
d). Rhombic antennas

39. One of the following instrument which may be used to measure the optical activity of compounds is –
a.)Infrared spectrometer
b.) Atomic absorption spectrometer
c.) Polarimeter
d.) Flouroscope

40. Schering bridge measures –
a.)Capacitance dielectric loss

b.) Inductance
c.)Resistance
d.) Mutual inductance

41.When a square wave is fed to an RC circuit, then –
a.) voltage across R is square and across C is not square
b.) voltage across C is not square and across R is not square
c.) voltage across both R and C are square
d.) voltage across both R and C are not square

42. The time constant of the RC circuit is –
a.) less than the time period of the input square wave.
b). much larger than the time period of the input square wave.
c. equal to the time period of the input square wave.
d). none

43. Harmonic distortion for each frequency can be obtained by harmonic analyser of the –
a.)heterodyne type
b.) tuned circuit type
c.) fundamental suppression type`
d.) bridge circuit type.

44. A three phase wattmeter requires –
a). only two current coils and two pressure coils
b.)only one current coil and two pressure coil
c.) only two current coils and one pressure coil
d.) only current coil

45. A low pass filter circuit is basically –
a.) a differentiating circuit with low time constant
b.) a differentiating circuit with large time constant.
c.) an integrating circuit with low time constant.
d.)an integrating circuit with large time constant.

46. If the differential pressure in restriction type flow measuring devices is then the flow will be proportional to –
47. When a system is represented by the transfer function then the dc gain of this system is –
a.) 1
b.) 2
c.) 5
d.) 10

48. Silicon based semiconductor device called thyristor was first fabricated by –
a). Jell laboratories in U.S.A
b). Maxwell laboratories in U.S.A
c.) Bell laboratories in U.S.A
d). GEC laboratories in U.S.A

49. A semiconductor based temperature transducer has a temperature coefficient of –2500mV/0C. This transducer is indeed a –
a.)Thermistor
b.) Forward biased pn junction diode
c.)Reverse biased pn junction diode
d.) FET
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50. Which of the followings pairs of Telemetry situations and Modulation techniques and conditions is correctly matched-
a.)Pulse amplitude modulation Low amplitude signals
b.)Pulse position modulation For short distance when power is enough
c.) Pulse width modulation Power to be spent in telemetry is required to be low
d.) Pulse code modulation. Minimisation of interference effects.

51. The SCR ratings di/dt in A/m sec and dv/dt in n/m sec, may vary, respectively between-
a.) 20 to 500, 10 to 100
b.)both 20 to 500
c.) both 10 to 100
d.) 50 to 300, 20 to 500

52. Match the given controlled rectifiers with 50 Hz supply
a.)1 phase full converter with source inductance
b.)3 phase full converter
c.)3 phase semiconductor
d.)3 phase halls wave converter

53. For natural or forced commutation the cyclo converters (CCs) requires as under.
a) natural commutation in both step up and step down CCs
b.) forced commutation in both step up and step down CCs
c.) forced commutation in step up CCs
d). forced commutation in step down CCs

54. The peak inverse voltage in ac to dc converter system is highest in-
a). single phase full wave mid point converter
b). single phase full converter
c) 3 phase bridge converter
d). 3 phase half wave converter.

55. A single phase full converter feeds power to RLE load with R = 6 W L = 6 MH and E = 60 V. The ac source voltage is 230 V, 50 Hz, For continuous conduction, the average value of load current for a firing angle delay of 50 is
a.)12.181 A
b). 14.81 A
c). 16.76 A
d.) 32.40 A

56. Which one of the following is the Fourier transform of the signal given in fig. B if the Fourier transform of the signal in fig A is given by -

57. What is 215 complement of 00011100-
a.) 11100011
b.) 10001100
c.) 11100100
d.) 10000111

58. In C programming a expression contains relational operators, assignment operators and arithmetic operators if parentheses is absent then execution follows
a.) assignment, relational, arithmatic
b.) arithmatic, relational, assignment
c.) relational, arithmatic, assignment
d.) assignment, arithmatic, relational

59. In semiconductor memory information stored in form-
a.) binary
b.) hexadecimal
c.) octal
d.) ASCII

60. i\p to Not gate gives o/p as-
a) inversion of some bits
b.) 2's complement of i\p
c.) 1's complement of i\p
d.) o/p is some as i\p

61. A negative logic means-
a .)logic 0 and 1 are represented by a +ve voltage respective
b). logic 0 and 1 are presented as –ve and +ve voltage
c.)logic 0 voltage is higher than logic 1 voltage level
d.) logic 0 voltage is lower than logic 1 voltage level

62. For designing D flip flop from SR FF a circuit is aloud at 01p of SR FF is-
a.) AND
b.) OR
c.) NOR
d.) NOT

63.The transistor shown in fig is

a.) Silicon, NPN with Ic = 0.5 mA
b.) Silicon PNP with Ic = 0.5 mA
c.) Germanium PNP with IE = 0.5 mA
d.) Germanium NPN with Ic=0.5 mA

64.A 20,000 Ohms per volt meter will deflect full-scale with a current of -
a.) 50 mA
b.) 50 mA
c.) 100 mA
d.) 1000 mA

65. A plate modulated class –CRF power amplifier produces 100 KW of radiated
power at 100 % modulation. The modulating audio amplifier supplies approximately
-------- kW of this power-
a.)50
b).33
c).22
d).11

66..An amplifier without feedback has a distortion of 15 % and gain of 40. When
10% negative feedback is applied the distortion will become-
a.) 50 %
b). -45 %
c). 3%
d). -5%

67. MODEM implies-
a.)Modulator at transmitting side and ditector at the receiving side
b.)Which deals with analog signals and shows digital information
c.)Analog to digital at transmitting side and digital to analog at a receiving side
d).A device which deals with digital signals only

68. Twisted ring and ring counters are examples of –
a.)Synchronous counters
b.) Asynchronous counters

c.) both a and b
d.) None of the above

69. Specify Non characteristic flip flop in the following –
a.) The outputs are complement of each other
b.) The flip flop has two input signals
c.) The flip flop has two output signals
d). The flip flop is a bistable devise with only two stable states

70. The voltage obtained when digital input is 001 is a 3 bit R-2R ladder DIA converter is-
a.) VR/22
b.) VR/21
c.) VR/23
d.) none of the above

71. Identify NOT an octal number-
a.) 19
b). 15
c.) 77
d.) 101

72. The set of binary digits 01000100 represent's-
a.) number 6810 in a pure binary computer
b.) number 44 in 8421 BCD code
c) Both a and b
d.) None of the above

73. The system matrix of a continuous time system, described in the state variable form is –

The system is stable for all values of x and y satisfying –
a.)x < 1/2, y < 1/2
b). x < 0, y < 2
c.)x > 1/2 , y >0
d.) x < 0 , y < 1/2

74. The break away and break in point in the root locus for open loop transfer function G(S) H(S) = are located respectively at –
a). –2 and -1
b). –2.47 and –3.77
c.) –4.27 and –7.73
d.) –7.73 and –4.27

75. The transfer function for the given system shown in figure is –

76. The type and order of the system whose Nyquist plot is shown in fig is-
a.)0.1
b.) 1,2
c.) 0,2
d). 2,1

77. The overall transfer function in a second order is given by-
Its resonant frequency is -
a.) 2
b.)
c).
d.) 3

78. The detection of an AM waveform in an Envelope –
a.)One side band and full amplitude carrier are needed
b.) Both side bands and full amplitude carrier are needed
c). Only two side bands are needed
d). Upper side band and part of carriers are needed

79. Satellite used for intercontinental communication is known as –
a.) Comsat
b). Dom sat
c.) Mari sat
d). Intelsat

80. Mark out non submarine cable –
a.)TAT – 7
b.) INTELSAT V
c.) ATLANTIS
d.)CANTAT 2

81. The capacity of an analog communication channel with 4kHz bandwidth and 15 dB SNR is approximately-
a). 20,000 bps
b). 16,000 bps
c.) 10,000 bps
d.) 8,000 bps

82. The blind speed of an MTI radar can be avoided by changing the-
a.) Carrier frequency
b.) Pulse repetition frequency
c.)Antenna rotation rate

d.) Transmitted power

83. The output voltage in a feedback series regulator circuit is regulated by controlling the-
a.) Magnitude of the input voltage
b.) Gain of the feedback transistor
c.) Reference voltage
d.) Voltage drop across the series pass transistor

84. Indicate the signal not transmitted in colour TV-
a.) Y
b.) Q
c.) R
d.) I

85. As frequency of singal increases-
a.) Directivity increases & beam width increases
b.) Directivity & beam width decreases
c.) Directivity increases & beam width decreases
d.) Directivity decreases & beam width increases

86. The number of hardware interupts (which require an external signal to interrupt) present in on 8085 mP are
a). 1
b). 4
c.) 5
d.) 13

87. Highest priority interupt is-
a.)INTR
b.)RST 7.5
c.)RST 6.5
d.)TRAP

88. One instruction cycle means-
a.)Time require to execute set of instructions
b.)Time require to execute one instruction
c.) Time require to complete one operation of accessing memory, or I/o
d.) None of above

89. If the clock freq. is 5 mH3 how much time is required to execute on instruction of 18 T-states-
a.)3.6 msec.
b.) 36 m sec.

c.) 36 m sec.
d.) 36 sec.

90. In data transfer operation which flog get affected-
a.)zero flog
b.)carry flog
c.)sign flog.
d.) none

91. CMP instruction comes under group -
a.)Data transfer
b.)Brouching operations
c). Machine control operation
d.) logical operations

92. The logic operation-
a.) are performed in relation to content of Accemce lotor
b).can be performed derectly with content of the register.
c.)are performed without content of a
d.)none of above.

93. What happen when PUSH instruction executed -
a.) data retrieved from stock to register
b.) data from register saved on the stock.
c.) 16 bit address of instruction saved on stock.
d.) 16 bit address from stock retrieved

94. SIM stands for-
a.) serial interface memory
b.) set interrupt mosk
c.) set if minus
d.) set internal memory

95. Maximum clock frequency required to operate 8085-
a.)2 MHz
b.) 3 MHz
c) 6 MHz
d.)9 MHz

96. ASCII code is-
a). 7 bit
b). 8 bit
c.)16 bit
d.) 32 bit.

97. In memory mapped I/O address lines are-
a.) 8
b.) 16
c.) 32
d.) 64

98. The parity bit adding technique is used for -
a.)Indexing
b.)Coding
c.)Error detection
d.)Controlling

99. A demultiplexer-
a.)has multiple i/p and single o/p
b.) has single i/p and multiple o/p
c.) has multiple i/p and multiple o/p
d.) has single i/p and single o/p
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100. Subroutines are useful-
a.)to reduce storage requirements
b.) to increase programming speed and reduce storage
c.) most applications are same
d.) but increases expense

101. As daring goes with temerity same way clear-sighted with –
a.)Perspicacity
b.) Impulsiveness
c.)Energy
d.)Clemency

102. A man who visits his friend is a –
a.)Host
b.)Guest
c.)Master
d.) Owner

103. Zealot is –
a.)beginner
b.) Patron
c.) fanatic
d.) Murderer

104 Give the plural of 'Mouse' –

a.)Mouse's
b). Mice
c). Mouse
d). None

105. Find the part of speech of the underlined word –
Shama and Radha were playing together.
a.)Preposition.
b.)Noun
c.)Conjunction.
d) Verb.

106. Which of the following is not one of the multiple names of ganesha?
a). Vinayaka
b). Lambodra
c.) Ekadanta
d.) Vighneshwara
e.)all of the above

107. If a man weighs 60 Kilograms on earth, how much will be his weight on the
moon?
a.)50 kg
b.)40 kg
c.)20 kg
d.)10 kg

108. The only Indian star selected for waxing at the famous Madame Tussaud's wax
is-
a.)Salman Khan
b.)Amitabh Bachan
c.)ShahRukh Khan.
d.)Raj Kapoor

109 Rate of gowth of per capita income in India drops down to – percent in 2000-
2001-.
a.)5.3 percent
b.)3.5 percent
c.)4.8 percent
d.)8.4 percent

110. Ascorbic acid is the chemical name of-
a.)Vitamin A
b.)Vitamin B
c.)Vitamin C

d.) Vitamin D

111. All India Muslim League was founded by-
a.)Nawab Slimullah Khan
b.)Sir Mohd Iqubal
c.) Sir syed Ahmed Khan
d.) Moulana Shaukat Ali

112. Red Blood corpuscles are formed in-
a.)Marrow
b.) Kidney
c). Liver
d). heart

113. The southern most tip of India is in-
a.)Lakshadweeep
b.) Kanya Kumari
c.)Andaman and Nicobar Islands
d.)Rameswaram

114 The first bowler in cricket history to take 500 test wickets is-
a.) Imran Khan
b). Courtney Walsh
c). Shane Warne
d.) Muttiah Murlidharan

115 President of the National Consumer Disputes Redress al Commission (NCDRC) is-
a.) Mr. D.C Wadhwa
b). Mr. A. P Wadhwa
c.) Mr. A. C Wadhwa
d.) Mr. D. P Wadhwa

116. C.V. Raman got Nobel Prize for-
a.)Themodynamics
b.) Quantum theory
c.)Optics and spectroscopy
d.) Nuclear Physics

117. First governor general of Bengal-
a). Lord Clive
b.) Lord warren Hastings
c.)Lord Lytton
d.) Lord Ripon

118. The slogan "Do or Die" is associated with-
a.) Subhash Chandra Bose
b.) Gandhigi
c.) Harijan
d.) Satyagraha

119. Champaran is in the state of-
a). Gujarat
b). Maharashtra
c.) Bihar
d). Madhya Pradesh

120. These tribes are found in central Asia-
a.)Garos
b.)Kirghiz
c.) Lushai
d). Santhals

Exam Name:

TTA (Telecom Technical Assistant)

Specialization:

Section A - Electrical

Conducted By:

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Conducted In:

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Number of Questions:

50

Maximum Marks:

250

Time Allowed:

90 Minutes

Negative Marking:

Yes

Type of Questions:

Objective Type (Multiple Choice)

SECTION A - ELECTRICAL

1. In a D.C. generator, if the brushes are given a small amount of forward shift, the effect of armature is

a. Totally demagnetizing

b. Totally magnetizing

c. Partly demagnetizing and partly cross magnetizing

d. Totally cross magnetizing

2. The air gap between stator and armature of an electric motor is kept as small as possible

a. To get a stronger magnetic field

b. to improve the air circulation

c. To reach the higher speed of rotation

d. To make the rotation easier.

3. Two series motors are coupled. One motor runs as generator and other as motor. The friction losses of the two machines will be equal when

a. Both operates at same voltage

b. Both have same back emf

c. Both have same speed

d. both have same excitation

4. Plugging of D.C. motor is normally executed by

a. Reversing the field polarity

b. Reversing the armature polarity

c. Reversing both the armature and field polarity

d. Connecting a resistance across the armature.

5. Transformer oil transformer provides

a. Insulation and cooling

b. B. Cooling and lubrication

c. Lubrication and insulation

d. Insulation, cooling and lubrication

6. Leakage fluxes of transformer may be minimized by

a. Reducing the magnetizing current to the minimum

b. Reducing the reluctance of the iron core to the minimum

c. Reducing the number of primary and secondary turn to the minimum

d. Sectionalizing and interleaving the primary and secondary windings

7. Electric power is transformed upon one coil to other coil in a transformer

a. Electrically

b. Electro Magnetically

c. Magnetically

d. Physically

8. The most suitable and economical connection for small high voltage transformer is-

a. Star- Delta connection

b. Delta- Delta connection

c. Delta- Star connection

d. Star- Star connection

9. An alternator is said to be over excited when it is operating at

a. Unity power factor

b. Leading power factor

c. Lagging power factor

d. Either lagging or leading power factor

10. In an A.C. machine, the armature winding is kept stationary while the field winding is kept rotating for the following rason

a. Armature handles very large currents and high voltages

b. Armature friction involving deep slots to accommodate large coils is easy if armature is kept stationary

c. Ease of cooling the stator than rotor

d. None of the above.

11. In a synchronous motor, the torque angle is the

a. Angle between the rotating stator flux and rotor poles

b. Angle between the magnetizing current and back emf

c. Angle between the supply voltage and back emf

d. None of the above

12. A 3-phase synchronous motor is said to be "floating" when it operates

a. On no load and without loss

b. On constantly varying load

c. On pulsating load

d. On high load and variable supply voltage

13. Speed of synchronous motor depends upon

a. Number of poles

b. Supply frequency

c. Both (a) and (b)

d. Neither (a) nor (b)

14. Imbalance in the shaft of an induction motor occurs due to

a. Slip rings

b. Overheating of winding

c. Non uniform of air gap

d. Rigid consturcion

15. Squirrel cage induction motor has

a. Zero starting torque

b. Very small starting torque

c. Medium starting torque

d. Very high starting torque

16. The principle of operation of a 3-phase induction motor is similar to that of a

a. Synchronous motor

b. Repulsion - start induction motor

c. Transformer with a shorted secondary

d. Capacitor - start, induction - run motor

17. The speed/load characteristics of a universal motor are similar to those

a. D.C. shunt motor

b. D.C. series motor

c. A.C. motor

d. None of the above

18. Single phase A.C. motor generally used for vacuum cleaners is

a. Universal motor

b. Repulsion motor

c. Hysteresis motor

d. Reluctance motor

19. Buchholz relay is used for the protection of

a. Switch yard

b. Transformers

c. Alternators

d. Transmission lines

20. The type of braking used in traction system is

a. Mechanical braking

b. Electro - pneumatic braking

c. Vacuum braking system

d. All the above

21. The function of processing zenger diode in a UJT circuit used for triggering of SCRs is to

a. Expedite the generation of triggering pulses

b. Delay the generation of triggering pulses

c. Provide a constant voltage to UJT to prevent erratic firing

d. Provide a variable voltage to UJT as the source voltage changes

22. The frequency of a ripple in the output voltage of a 3 - phase semi converter depends upon

a. Firing angle and load resistance

b. Firing angle and supply frequency

c. Firing angle and load inductance

d. Only on load circuit parameters

23. The SCR is turned off when the anode currents falls below

a. Forward current rating

b. Break - over voltage

c. Holding current

d. Latching

24. V4 characteristics of emitter of a UJT is

a. Similar to CE with linear and saturation region

b. Similar to FET with a linear and pinch of region

c. Similar to tunnel diode in some respects

d. Linear between the peak point and valley point

25. A transformer works on

a. DC

b. AC

c. AC & DC both

d. Neither AC not DC

26. Which of the following device is used in transformer?

a. Tube light

b. Electric heater

c. Mobile phone

d. Rectifier module

27. Earth electrodes can be in the form of

a. rods or piper

b. stripes

c. plates

d. any of above

28. Carbone or metal brushes are used in

a. DC generators only

b. AC generators only

c. Both AC & DC generation

d. None of above

29. Energy is lost due to Joule's heating effects in winding of transformer. This is called

a. Copper loss

b. Eddy current loss

c. Flux loss

d. None

30. In refrigeration cycle heat is lost in

a. Cooling coil

b. Condenser

c. Compressor

d. Expansion valve

31. The power factor of AC circuit is

a. R/X

b. R/Z

c. Z/R

d. Zero

32. Silicon controlled output is good if ripple factor is

a. Switch

b. Transformer

c. Amplifier

d. None of above

33. The rectifier output is good if ripple factor is\

a. More

b. Less

c. Constant

d. None of above

34. Protective relays can monitor large AC current by means of

a. Current transformer

b. Potential transformer

c. Micro transformer

d. None of above

35. The combines AM of two similar batteries connected in parallel is:

a. halved

b. doubled

c. remain constant

d. none of above

36. The current in circuit having 5 V EMI source and 10 Ohm resistance is:

a. 2 Amp

b. 50 Amp

c. 5 Amp

d. ½ Amp

37. The chopper is a device to change

a. Voltage

b. Current

c. Frequency

d. None of these

38. The power consumption, in case of centrifugal loads (like pump, fan, blower etc) is proportional to:

a. speed

b. square of speed

c. cube of speed

d. none of these

39. Which of these need to be measured after rewinding the motor:

a. no load current

b. air gap

c. winding resistance

d. all of the above

40. Five percent increase in supply frequency will change the synchronous speed of motor by:

a. -5%

b. +5%

c. -10%

d. +10%

41. Which of the following is the best inverter?

a. square wave inverter

b. sine wave inverter

c. pure sine wave inverter

d. triangular wave inverter

42. For driving a motor in a tape recorder or record player, the motor used is generally:

a. a synchronous motor

b. a hydraulic motor

c. an induction motor

d. a dc series motor

43. The DC motor starter used with a constant speed shunt motor is:

a. 2 point starter

b. 3 point starter

c. 4 point starter

d. 5 point starter

44. A commutator in a DC motor converts

a. AC to DC

b. DC to AC

c. Both AC to DC and DC to AC

d. None of these

45. Two transformers running in parallel will share the load according to their:

a. leakage reactance

b. pu impedance

c. efficiency

d. rating

46. The size of the Earth Wire is determined by:

a. the ampere capacity of the service wires

b. the atmospheric conditions

c. the voltage of service wires

d. none of these

47. The function of lightning arrester is:

a. to limit the short circuit fault current

b. to provide path to high voltage surge to earth

c. to reduce arcing

d. none of these

48. Surge protector provide:

a. high impedance to normal voltage

b. low impedance to surge

c. both (a) and (b)

d. none of these

49. Earthing is necessary to give protection against

a. voltage fluctuation

b. overloading

c. danger of electric shock

d. high temperature of conductors

50. The primary function of fuse is to

a. protect the appliance

b. open the circuit

c. prevent excessive current

d. protect the line

Exam Name:

TTA (Telecom Technical Assistant)

Specialization:

Section F - Microprocessors

Conducted By:

BSNL (Bharat Sanchar Nigam Limited)

Conducted In:

December 2007

Number of Questions:

50

Maximum Marks:

250

Time Allowed:

90 Minutes

Negative Marking:

Yes

Type of Questions:

Objective Type (Multiple Choice)

1. A 32-bit processor has

(a) 32 registers

(b) 32 I/O devices

(c) 32 Mb of RAM

(d) a 32-bit bus or 32-bit registers

2. Clock speed is measured in

(a) bits per second

(b) Hertz

(c) bytes

(d) baud

3. A 20-bit **address bus** allows access to a memory of capacity

(a) 1 MB

(b) 2 MB

(c) 4 MB

(d) 8 MB

4. A microprocessor contains

(a) most of RAM

(b) most of ROM

(c) peripheral drivers

(d) most of the control and arithmetic logic functions of computer

5. Which of the following is NOT a type of processor?

(a) PowerPC

(b) Motorola 8086

(c) Motorola 68000

(d) Intel Pentium

6. If interrupt arrives on the three lines INTR, RTS 6.5 and RTS 7.5, which of them will the 8085 processor acknowledge?

(a) INTR

(b) RTS 6.5

(c) RTS 7.5

7. The Intel 8086 processor is

(a) 8-bit

(b) 16-bit

(c) 32-bit

(d) 64-bit

8. An assembly language instruction

(a) always has a label

(b) always takes at least one operand

(c) always has an operation field

(d) always modifies the status register

9. An interrupt instruction

(a) causes an unconditional transfer of control

(b) causes a conditional transfer of control

(c) modifies the status register

(d) is an I/O instruction

10. Programs are written in assembly language because they

(a) run faster than High-level language

(b) are portable

(c) easier to write than machine code programs

(d) they allow the programmer access to registers or instructions that are not usually provided by a High-level language

11. Given that the subprogram putc displays the character in al, the effect of the following instruction is -

mov al, 'c'

sub al, 2

call putc

(a) display 2

(b) display 'c'

(c) display 'a'

(d) display a blank

12. The result of mov al, 65 is to store

(a) store 0100 0010 in al

(b) store 42H in al

(c) store 40H in al

(d) store 0100 0001 in al

13. Microprocessor is also often called a

(a) Chip

(b) Resistor

(c) Capacitor

(d) Transistor

14. A microprocessor's program counter has

(a) the digital value of the data

(b) the address of an instruction

(c) the address of data

15. Which of the following is a math co-processor?

(a) 8085

(b) 8086

(c) 8087

(d) 8088

16. Interrupts are classified as

(a) Hardware interrupts

(b) Software interrupts

(c) Hardware interrupts and Software interrupts

(d) none of the above

17. The system bus is made up of

(a) data bus

(b) data bus and address bus

(c) data bus and control bus

(d) data bus, control bus and address bus

18. The memory address register is used to store -

(a) data to be transferred to memory

(b) data that has been transferred from memory

(c) the address of a memory location

(d) an instruction that has been transferred from memory

19. When an interrupt occurs, the processor completes the current _____ before jumping to the interrupt service subroutine

(a) microinstruction it is executing

(b) instruction it is executing

(c) macro it is executing

(d) subroutine it is executing

20. A microprocessor is a processor with a reduced

(a) instruction set

(b) power requirement

(c) MIPS performance

(d) none of the above

21. A scheme in which the address specifies which memory word contains the address of the operand, is called

(a) Immediate addressing

(b) Based addressing

(c) Direct addressing

(d) Indirect addressing

22. Processor gets the address of the next instruction to be processed from

(a) Instruction register

(b) Instruction counter

(c) Program counter

(d) Program register

23. Fetch operations are not required in

(a) Immediate addressing

(b) Register addressing

(c) Direct addressing

(d) Indirect addressing

24. What is meant by Maskable interrupts?

(a) An interrupt that can be turned off by the programmer.

(b) An interrupt that cannot be turned off by the programmer.

(c) An interrupt that can be turned off by the system.

(d) An interrupt that cannot be turned off by the system.

25. Which interrupts are generally used for critical events such as Power failure, Emergency, Shut off etc.?

(a) Maskable interrupts

(b) Non-Maskable interrupts

(c) none of the above

26. Which microprocessor accepts the program written for 8086 without any changes?

(a) 8085

(b) 8087

(c) 8088

27. How many memory locations are required to store the instruction LXI H, 0800H in an 8085 assembly language program?

(a) 1

(b) 2

(c) 3

(d) 4

28. How many memory fetches (including instruction fetch) are required to execute the instruction LXI H, 0800H in an 8085 assembly language program?

(a) 1

(b) 2

(c) 3

(d) 4

29. MPU stands for

(a) Multi-Processing Unit

(b) Micro-Processing Unit

(c) Mega-Processing Unit

(d) Major-Processing Unit

30. Which of the following is not possible by a microprocessor?

(a) Reading from Memory

(b) Writing into Memory

(c) Reading from Input port

(d) Writing into Input port

31. In which microprocessor does the concept of pipeline first introduced?

(a) 8086

(b) 80286

(c) 80386

(d) 80486

32. LSI stands for -

(a) Large Size Instruction

(b) Large Scale Instruction

(c) Large Size Integration

(d) Large Scale Integration

33. Which of the following is true about pseudo code?

(a) A machine language

(b) An assembly language

(c) A high level language

(d) none of the above

34. The macro processor must perform

(a) recognize macro definitions and macro calls

(b) save the macro definitions

(c) expand macro calls and substitutes arguments

(d) all of the above

35. A 32 bit microprocessor has the word length equal to

(a) 1 byte

(b) 2 byte

(c) 4 byte

(d) 8 byte

36. The TRAP interrupts mechanism of the 8085 microprocessor

(a) execute an instruction supplied by an external device through the INTA signal

(b) execute an instruction from memory location 20H

(c) executes a NOP

(d) none of the above

37. What are the states of the Auxiliary carry (AC) and Carry flag (CY) after executing the following 8085 program?

MVI   H, 5DH

MVI   L, 6BH

MOV   A, H

ADD   L

(a) AC=0 and CY=0

(b) AC=1 and CY=1

(c) AC=1 and CY=0

(d) AC=0 and CY=1

38. Contents of register A after the execution of the following 8085 microprocessor program is

MVI A, 55H

MVI C, 25H

ADD C

DAA

(a) 7AH

(b) 80H

(c) 50H

(d) 22H

39. Which of the following is a 16-bit micro processor?

(a) Motorola 6800

(b) Intel 8085

(c) Intel 8086

(d) Zilo 80

40. The Intel Pentium Pro microprocessor uses 36 address lines to access memory. What is the maximum memory that it can support, in gigabytes?

(a) 16

(b) 32

(c) 64

(d) 128

41. Out of the following which is not the flag in 8085 microprocessor

(a) Counter flag

(b) Carry flag

(c) Zero flag

(d) Parity flag

42. What is a basic element of Memory?

(a) Transistor

(b) Flip-flop

(c) Gate

(d) none of the above

43. Which group of instructions do not affect the flags?

(a) Arithmetic operations

(b) Logic operations

(c) Data transfer operations

(d) Branch operations

44. DMA stands for

(a) Direct Memory Allocation

(b) Distinct Memory Allocation

(c) Direct Memory Access

(d) Distinct Memory Access

45. In RST interrupts, RST stands for

(a) Repeat Start Test

(b) Restart

(c) Start

46. Which interrupt has the highest priority?

(a) TRAP

(b) RST 6

(c) RST 6.5

(d) INTR

47. In 8085 microprocessor with memory mapped I/O

(a) I/O device have 8-bit addresses.

(b) I/O devices are accessed using IN and OUT instructions.

(c) arithmetic and logic operations can be directly performed with the I/O data.

(d) there can be a max of 256 input devices and 256 output devices.

48. A microprocessor -

(a) reads instructions from memory

(b) communicates with I/O devices

(c) controls the timing of information flow

(d) all of the above

49. An instruction consists of

(a) Data and Address

(b) Register and Memory

(c) Opcode and Operand

(d) Input and Output

50. If the 8085 adds 87H and 79 H, which of the following flags will become 1

(a) Zero flag and Auxiliary Carry flag

(b) Zero flag and Carry flag

(c) Carry flag and Auxiliary Carry flag

(d) none of the above

1. When a inductive coil connected to a 200 V, 50Hz ac supply with 10A current flowing through it dissipates 1000 watts then which of the following will have least value in ohms-
a.) Resistance
b.) Reactance
c.) Impedance
d.) None

2 Oscillator crystal are made of –
a.) Silicon
b.) Germanium
c.) Quartz
d.) None

3. For small size, high frequency coils, the most common core material is-
a.)Air
b.)Ferrite
c.) Powdered ion
d.) Steel

4. If we have a parallel plate capacitor of plate area 'A' and plate separatoin t and having a capacity C and a metallic plate r of area A and of negligible thickness is introduced in the capacitor at a distance from either of the two plates as shown in the given figure then the capacity of the capacitor will become –
a.)
b.)C
c.)2C
d.)4C

5. A superconductor is a –
a.)A material showing perfect conductivity and Meissner effect below a critical

temperature
b.)A conductor having zero resistance
c.)A perfect conductor with highest di-magnetic susceptibility
d.)A perfect conductor which becomes resistance when the current density through it exceeds a critical value

6. When an inductor tunes at 200 KHz with 624 pF capacitor and at 600 KHz with 60.4 pF capacitor then the self capacitance of the inductor would be –
a)8.05 pF
b)10.05pF
c.)16.01pF
d.)20.01pF

7. Sparking occur when a load is switched off because the circuit has high –
a.)Inductance
b.)Capacitance
c.)Resistance
d.)None

8. Sparking between contacts can be reduced by inserting a –
a.)Resistance in the line
b.)Capacitor in series with contacts
c.)Capacitor in parallel with contacts
d.)None

9. RF amplifier of an A.M. receiver is normally biased in –
a.)Class 'A'
b.)Class 'b'
c.)Class 'C'
d.)None

10. The value of gate voltage for the operation of enhancement of only N channel MOSFET has to be –
a.)High positive
b.)High negative
c.)Low positive
d.)Zero

11. The input gate current of a FET is –
a.)a few microamperes
b.)negligibly small
c.)a few milliamperes
d.)a few amperes

12. In the following fig. with R = 30k, the value of current through 2 K resistor is –
a.)25 mA
b.)40 mA
c.)25/16 mA
d.)10 mA

13. A step recovery diode –
a.)has on extremely short recovery time
b.)conducts equally well in both directions
c.)is mainly used as a harmonic generator
d.)is an ideal rectifiers of high frequency signals

14. In order to get maximum undistorted output signal from CE amplifier with VCC 10V, the value of VCE (Q) should be approximately-
a.)0.1V
b.)5V
c.)10V
d) V

15. In a FET the electrode, which corresponds to collector in bipolar transistor, is –
a.)source
b.)drain
c.)gate
d.)none

16. The device which acts like an NPN and a PNP transistor connected base to base and emitter to collector is –
a.)Triac
b.)UJT
c.)Diac
d.)SCR

17. A typical optical fibre has –
a.)High refractive index core and low refractive index cladding
b.)Low refractive index core and high refractive index cladding
c.)Both a and b
d.)None

18. In the following figure circuit diagram of an op-amp based is shown. The ratio is equal to –
a.)9
b.)11
c.)10
d.)21

19. When a loud speaker is connected across the terminals A and B of the network shown in the fig. then its impedance to obtain maximum power dissipation in it will be –
a.)3 – j1
b.)3 + j9
c.)7.5 + j 2.5
d.)7.5 – j 2.5

20. In the lattice network, the value of R for the maximum power transfer to the load –
a.)5
b.)6.5
c.)8
d.)9

21. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (Z0 is the characteristic impedance, Ö is the propagation constant and l is the length of the line-
a.)Z0 cot h Öl
b.)Z0 cot Öl
c.)Z0 tan h.Ö l
d.) Z0 tan Öl

22. The approximate thickness of the radome wall should be –
a.)l
b.)l/4
c.)l/2
d.)l/

23 A relatively permanent information is stored in
a.)ROM
b.)RAM
c.)PROM
d.)Volatile memory

24. The rise time of the RC network shown in the given figure is approximately equal to –
b.) RC
c.) 2RC
d.) 4RC

25. If in the network shown in the fig. initially a steady state is attained by closing

the switch 's' and then if the switch is opened at t = 0, then the current i(t) through the inductor will be –
a.) cos50tA
b.) 2A
c.) 2cos100tA
d.) 2sin50tA

26. When the p network of figure – I and T-network of figure – II are equivalent then the values of R1, R2 and R3 will be respectively –
a) 9W, 6W and 6W
b.) 6W, 6W and 9W
c.) 9W, 6W and 9W
d.) 6W, 9W and 6W

27. When the impedance matrices of a two port networks are given by and , then if these two networks are connected in series then the impedance matrix of the resulting two-port network will be –
d.) indeterminate

28. Joule/coulomb is the unit of -
a.) Electric field potential
b.) Potential
c .) Charge
d.) None of the above

29. The electric field line and equipotential lines-
a.) Are parallel to each other
b.)Are one and same
c.) Cut each other orthogonally
d.)Can be inclined to each other at any angle

30. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (When Z0 is the characteristic impendence g is the propagation constant and L is the length of the line

31. When two equal positive point charges are placed along X- axis at X1 and –X1 respectively then the electric field vector at a point P on the positive Y-axis will be directed-
a.) In the +x direction
b.) In the –x direction
c.) In the +y direction
d.) In the –y direction

32. The directions of and in TEM mode transmission line with respect to the

direction of propagation are-
a.) Both and are transverse to the direction of propagation
b.) is and are transverse and h has a component in the direction of propagation
c.) is entirely transverse and has a component in the direction of propagation
d.) is entirely transverse and has a component in the direction of propagation

33. The lowest TM mode in a rectangular waveguide of cross –section a x b with a>b will be-
a.) TM01
b.)TE10
c.) TM112
d.)TE11

34. When a transmitter in a free space radiates a mean power of 'p' watts uniformly in all directions then at a distance d sufficiently far from the source in plane the electric field E should be related to p and d as –

35. When a dipole antenna was radiating with some excitation in free space radiating a certain amount of the power v if then this antenna is immersed in a lake where water is non-dissipative but has a dielectric constant of 81, then the radiated power with the same excitation will be
a.) Decrease to finite non-zero value
b.)Remain the same
c.)Increase
d.)Decrease to zero

36. When a (75 – j40)W load is connected to a coaxial line of Z0 = 75 W at 6MHz then the load matching on the line can be accomplished by connecting-
a.) A short – circuited stub at the load
b.)An inductance at the load
c.)A short circuited stub at a specific distance from the load
d.)none of the above

37. As compared to analog multimeters, digital multimeters are –
a.) less accurate
b.) more accurate
c.) equally accurate
d.) none.

38. When a signal of 10 mV at 75 MHz is to be measured then which of the following instruments can be used –
a.) VTVM
b.) Cathode ray oscilloscope

c.) Moving iron voltmeter
d.) Digital multimeter

39. Which of the following statement is true about two wattmeter method for power measurement in three phase current ?
a.) power can be measured using two wattmeter method only for star connected three phase circuits.
b.) when two meter show indentical readings, in the power factor is 0.5.
c.) when power factor is unit, one of the wattmeter reads zero
d.) when the reading of the two wattmeters are equal but of opposite sign, then the power factor is zero –

40. When a capacitance transducer has two plates of area 5cm2 each, separated by an air gap of 2mm than the displacement sensitivity in pf/cm due to gap change would be –
a.) 11.1
b.) 44.2
c.) 52.3
d.) 66.3

41. The Q of a radio coil –
a.) is independent of frequency
b.) increases monotonically as frequency increases
c.) decreases monotonically as frequency increases
d.) increases upto a certain frequency and then decreases beyond that frequency

42. When a generator of internal impedance and operating at 1GHz feeds a load via a coaxial line of characteristic impedance 50 ohm then the voltage wave ratio on the feed line is –
a.) 0.5
b.) 1.5
c.) 2.5
d.) 1.75

43. The coding system typically used in digital telemetry is –
a.) PPM (pulse position modulation)
b.) PAM (pulse amplitude modulation)
c.) PCM (pulse code modulation)
d.) PDM (pulse duration modulation)

44. Radiation pyrometers are used for the measurement of temperature in the range of –

a.) -2000C to 5000C
b.) 00C to 5000C
c.) 5000C to 12000C
d.) 12000C to 25000C

45. In the given figure band structure is shown. It is of –
a.) Gallium Avesenide (GaAs)
b.) Silicon (Si)
c.) Copper (Cu)
d.) Germanium (Ge)

46. When anode is positive with respect to cathode in an SCR, the numbers of blocked p-n junction is –
a.) 1
b.) 2
c.) 3
d.) 4

47. The circuit symbol for a GTO is
a. b.
c. d.

48. In the given fig. mark out the type of Cyclo converters
a.) 1 phase to 1 phase with continuous conduction
b.) 1 phase to 1 phase with discontinuous conduction
c.) step up device
d.) 3 phase to 1 phase device

49. In the given fig. A-1, C=5, m H and C=20 m F, C is initially charged to 200 V. After the switch.
S is closed at t = 0 the
maximum value of current and the
time at which it reaches this value are respectively.
a.) 400 A, 15.707 mS
b.) 50 A, 30 mS
c.) 100 A, 62.828 mS
d.) 400 A, 31.414 mS

50. In the given circuit the maximum current in the main SCR M can be-
a.) 200 A
b.) 170.7 A
c.) 141.4 A
d.) 70.7 A

1) Operation Flood is Related To
   ANS: Production of MilK

2) Capital of DaDra Nagar Haveli
   ANS: Silvasa

3) Suger Bowl Of India
   ANS: Uttar Pradesh

4) Minimum Age To Became President of India
   ANS: 35 year

5) BANKER OF BANK
   ANS: RBI

6) Oldest Mountain In India
   ANS: Araavali

7) Monsoon affected State
   ANS: Orrisa

8) Vidya Sagar Setu
   ANS: Hoogly river

9) Peroid of RajyaSabha
   ANS: 6 year

10) Our Indian Constitution pass By RAJYA SABHA
    ANS: 26 NOVEMBER 1949

PART 2 BASIC ENGINEERING

1) A+A(BAR)
   ANS: 1

2) A+AB
   ANS:A

3) FIND THE GATE

   ANS: A B Y
         0 1 1
         1 0 1

1   1   0

4) $(3AB)_{16}$ =2979

5) O/P of EXNOR Gate
    ANS :   A B   Y
            0 0   1
            0 1   0
            1 0   0
            1 1   1

6) ASCII is a
    ANS: 7 unit Code

7) In LASER " S" Stands for
    ANS: STIMULATED

8) Energy Band GAp of Silicon
    ANS: 1.1 ev

9) Wave Guide act as
    ANS: High Pass Filter

10) Bode Plot Is applicable to
     ANS: Minimum Phase Network

11) Efficiancy of CLASS B PUSH PULL Amplifier
     ANS: 78.5%

12) Ideal Voltage Controlled Current sourse has
     ANS: R_i = infinity R_0= ZERO

13) Break Down Voltage of SILICON
     ANS: 0.6

14) A Darling Pair Consist of
     ANS: Both Collector

15) Sampling Theorm Fibd application In
     ANS: PCM

16) Poynting Vector
     ANS: P=E*H

17) The Speaker used in Telephone RX is
     ANS: Fixed Coil Type

18) Measurment of High Q Inductence

AND: HAYS BRIDGE

19) Measurment of Very High Resistance
   ANS: MEGGER

1. When a piece of copper and another of germanium are cooled from room temperature to 80^0 K then the resistance of -

   Your Answer is :-

   Freshersworld.com Answer is :-d) Copper decreases and germanium increases

2. When a signal of 10 mV at 75 MHz is to be measured then which of the following instrument can be used -

   Your Answer is :-

   Freshersworld.com Answer is :-b) Cathode ray oscilloscope

3. When a sample of germanium and silicon having same impurity density are kept at room temperature then –

   Your Answer is :-

   Freshersworld.com Answer is :-d) Resistivity of silicon will be higher than that of germanium

4. When an RC driving point impedance function has zeros at s= -2 and s=-5 then the admissible poles for the function would be –

   Your Answer is :-

   Freshersworld.com Answer is :-b) s = 0; s = -3

5. For the n-type semiconductor with n = Np and p = $\dfrac{n^2}{N_D}$, the hole concentration will fall below the intrinsic value because some of the holes –

   Your Answer is :-

   Freshersworld.com Answer is :-d) recombine with the electrons

6. The location of lighting arrestor is –

   Your Answer is :-

   Freshersworld.com Answer is :-a) Near the transformer

7. Time constant of an RC circuit increases if the value of the resistance is –

   Your Answer is :-

   Freshersworld.com Answer is :-a) Increased

8. . Telemetering is a method of –

   Your Answer is :-

Freshersworld.com Answer is :-c) Transmitting information concerning a process over a distance

9. When the gauge factor of a strain gauge is 2, stress is 1050 kg/cm^2, Y = 2.1´ 10^6 kg/cm^2 and R is

100 ohms then the value of DR will be –

Your Answer is :-

Freshersworld.com Answer is :-d) 1W

10. As the drain voltage is increased for a junction FET in the pinch off region then the drain current –

Your Answer is :-

Freshersworld.com Answer is :-d) Remains constant

11. One of the following, which is not a transducer in the true sense, is –

Your Answer is :-

Freshersworld.com Answer is :-d) LCD

12. When a transistor is required to match a 100W signal source with a high impedance output circuit then the connection that would be used is –

Your Answer is :-

Freshersworld.com Answer is :-a) Common base

13. In a JFET gates are always –

Your Answer is :-

Freshersworld.com Answer is :-b) reverse biased

14. The main factor which differentiate a DE MOSFET from an E only MOSFET is the absence of –

Your Answer is :-

Freshersworld.com Answer is :-c) channel

15. An SCR conducts appreciable current when –

Your Answer is :-

Freshersworld.com Answer is :-b) Anode and gate are both positive with respect to cathode

16. Silicon is not suitable for fabrication of light emitting diodes because it is -
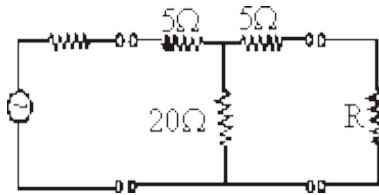
Your Answer is :-

Freshersworld.com Answer is :-b) A direct band gap semiconductor

17. An average responding rectifier type electronic ac voltmeter has its scale calibrated in terms of the rms value of a sine wave, when a square wave voltage of peak magnitude 100V is measured using this voltmeter then the reading indicated by the meter, will be –

Your Answer is :-
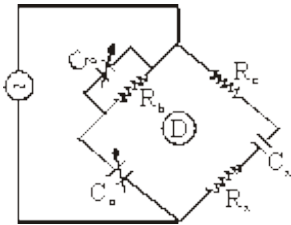
Freshersworld.com Answer is :-a) 111V

18. When a four terminal T network is inserted between a source and load resistance as shown in figure then the resistance seen by the source remain the same with or without the four terminal block when R is –

Your Answer is :-

Freshersworld.com Answer is :-c) 15 Ω

19.. In the ac bridge shown in the given figure, the value of R_x and C_x at balance will be –

Your Answer is :-

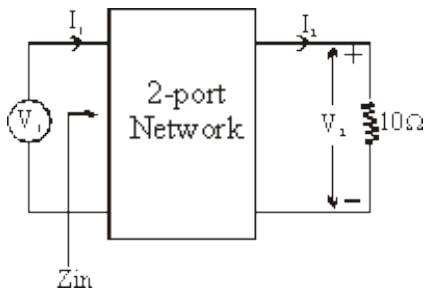$$\text{a. } R_x = \frac{C_b}{C_a}, \ C_x = \frac{R_b}{R_c} C_a$$

Freshersworld.com Answer is :-

20. . Which one of the following conditions for Z parameters would hold for a two port network containing linear bilateral passive circuit elements –

Your Answer is :-

Freshersworld.com Answer is :-d) $Z_{12} = Z_{21}$

21. When the transmission parameters of the following network are A = C = 1, B = 2 and D = 3 then the value of Z_{in} is –
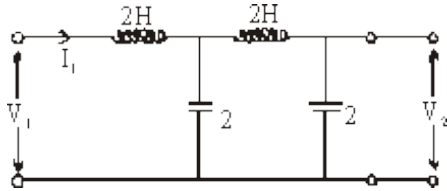

Your Answer is :-

$$\text{a. } \frac{12}{13} \ \Omega$$

Freshersworld.com Answer is :-

22. The value of G_{12} or $\left(\dfrac{v_2}{v_1}\right)$ for the circuit shown in the fig. is –
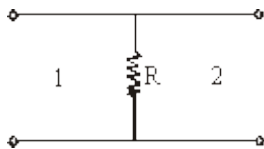

Your Answer is :-

d. $\dfrac{1}{16s^4 + 12s^2 + 1}$

Freshersworld.com Answer is :-

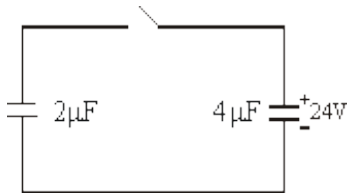23. The two port network of the fig. shown has open circuit impedance parameters given by matrix –

Your Answer is :-

a. $\begin{bmatrix} R & R \\ R & R \end{bmatrix}$

Freshersworld.com Answer is :-

24. In the circuit shown, the switch closes at t = 0. The voltage across 4μ F capacitor in ideal condition changes to –

Your Answer is :-

Freshersworld.com Answer is :-b) 16V

25. While calculating R_{th}, constant current sources in the circuit are –

Your Answer is :-

Freshersworld.com Answer is :-a) replaced by opens

26. Maxwell's loop current method of solving electrical networks –

Your Answer is :-

Freshersworld.com Answer is :-b) utilizes kirchhoff's voltage law

27. A transmission line of characteristic impedance $Z_0 = 50$ ohms, phase velocity $V_p = 2 \times 10^8$ m/s and length $l = 1$m is terminated by a load $Z_L = (30 - j\,40)$ ohms. The input impedance of the line for a frequency of 100 MHz will be

Your Answer is :-

Freshersworld.com Answer is :-b)$(30 - j40)$ ohms

28. For an elliptically polarized wave incident on the interface of a dielectric at the Brewster angle then the reflected wave will be-

Your Answer is :-

Freshersworld.com Answer is :-b) Linearly polarized

29. A yagi antenna has a driven antenna-

Your Answer is :-

Freshersworld.com Answer is :-d) With a reflector and one or more directors

30. The number of lobes on each side of a 3λ resonant antenna is –

Your Answer is :-

Freshersworld.com Answer is :-b) 6

31. The electric field intensity of a Hertizian dipole at a remote point varies as-

Your Answer is :-

$$a. \quad \frac{1}{r}$$

Freshersworld.com Answer is :-

32. Radiation resistance of a half wave folded dipole is -

Your Answer is :-

Freshersworld.com Answer is :-c) 288 Ω

33. When a carrier wave is modulated at 100% it's power is increased by -

Your Answer is :-

Freshersworld.com Answer is :-c)50%

34. On a clear sky day, the atmospheric radio noise is strongest -

Your Answer is :-

Freshersworld.com Answer is :-c) During nights

35. TV broadcasting system in India is as per CCIR -

Your Answer is :-

Freshersworld.com Answer is :-a) System B

36. For the safety measurement of the internal resistance of a 25-0-25 μ A meter, a laboratory multimeter whose sensitivity is equal to –

Your Answer is :-

Freshersworld.com Answer is :-d) 200 k ohm/volt can be used

37. In order to measure moisture in wood the most suitable method is –

Your Answer is :-

Freshersworld.com Answer is :-a) Electrical conduction

38. The flow rate of elctrically conducting liquid without any suspended practicle cannot be measured by –

Your Answer is :-turbine flow meters

Freshersworld.com Answer is :-d) thermistor based heat loss flow meters

39. The most useful transducer for displacement sensing with excellent sensitivity, linearity and resolution is –

Your Answer is :-

Freshersworld.com Answer is :-c) LVDT

40. When variable reluctance type techometer has 150 teeth on the rotor & the counter records 13,500 pulses per second then the rotational speed will be–

Your Answer is :-

Freshersworld.com Answer is :-b) 5400 rpm

41. 41. On a voltage scale, zero dB m in a 600-ohm system could refer to –

Your Answer is :-

Freshersworld.com Answer is :-b) 1.0 V

42. 42. One of the following devices which is required in addition in order to measure pressure using LVDT is-

Your Answer is :-

Freshersworld.com Answer is :-c) Bourden tube

43.. It is required to measure temperature in the range of 1300^0 C to 1500^0 c) The most suitable thermocouple to be used as a transducer would be –
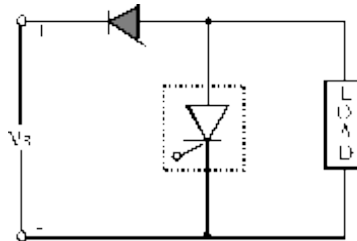
Your Answer is :-

Freshersworld.com Answer is :-d) platinum- rhodium

44. In a CSI if frequency of output voltage is f Hz, then frequency of input voltage to CSI is-

Your Answer is :-

Freshersworld.com Answer is :-b) 2 f

45. Identify the type of chipper in the given circuit

Your Answer is :-

Freshersworld.com Answer is :-b) Type B chopper

46. Maximum value of charging resistance in an UJT is associated with-

Your Answer is :-

Freshersworld.com Answer is :-a) peak point

47. Thyristor A has rated gate current of 2A and thyristor B a rated gate current of 100 mA-

Your Answer is :-

Freshersworld.com Answer is :-a) A is a GTO and B is a conventional SCR

48. In a 3 phase full converter, the output voltage during overlap is equal to-

Your Answer is :-

Freshersworld.com Answer is :-d) average value of the conducting phase voltages

49. Mark old the correct statement for Cycloconverters-

Your Answer is :-

Freshersworld.com Answer is :-a) step-down Cycloconverter (CC) works on natural commutation

50. . In a 3 phase full converter if load current is I and ripple free, then average thyristor current is-

Your Answer is :-

$$\frac{1}{3} I$$

Freshersworld.com Answer is :-b)

51. In the RF amplifier stage cascade (CE-CB) amplifier is used because it gives-

Your Answer is :-

Freshersworld.com Answer is :-c) Large isolation between the input and the output

52. Silicon diode is less suited for low voltage rectifier operation because-

Your Answer is :-

Freshersworld.com Answer is :-a) it can withstand high temperature

53. An amplifier of class A is that in which -

Your Answer is :-

Freshersworld.com Answer is :-c) I_e flows all the time

54. A transistor is in active region when-

Your Answer is :-

Freshersworld.com Answer is :-b) $I_C=\beta \ I_B$

55. For coupling purposes in RF amplifier a buffer amplifier is used because it provides-

Your Answer is :-

Freshersworld.com Answer is :-b) Minimum loading and minimum mismatch

56. A transistor has CE parameter as h_{ie} = 10kΩ , h_{re} =20 x 10^{-4} , h_{se} = 100, h_{oe} = 25 μ s. The h_{ib} for this transistor will be-
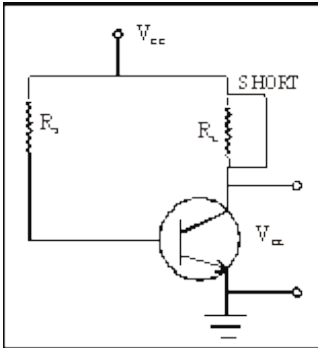
Your Answer is :--

Freshersworld.com Answer is :-b) 99.01 W

57. An FM radio receiver is tuned to a 90.6 MHz broadcast station. It will receive an image frequency of -

Your Answer is :-

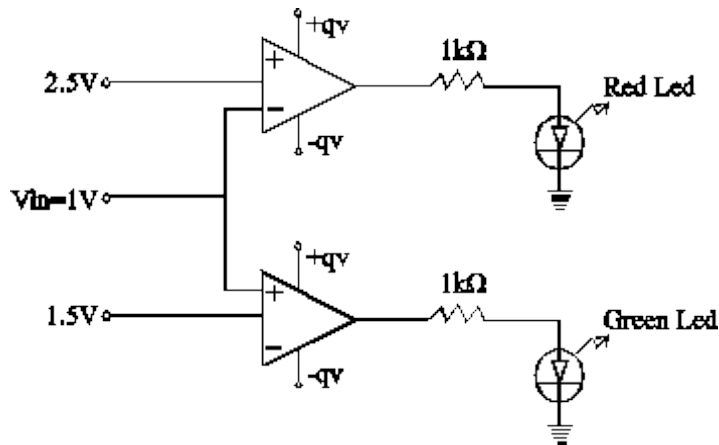Freshersworld.com Answer is :-b) 112 Hz

58. In the given fig R_L is shorted out, then V_{CE} will become-

Your Answer is :-

Freshersworld.com Answer is :-c) Equal to V_{CC}

59. See the circuit shown and choose the correct option –

Your Answer is :-

Freshersworld.com Answer is :-a) Only red will glow

60. A dc to dc converter having an efficiency of 80% is delivering 16W to a load) If the converter is generating an output of 200V from an input source of 20V, then the current drawn from the source will be –
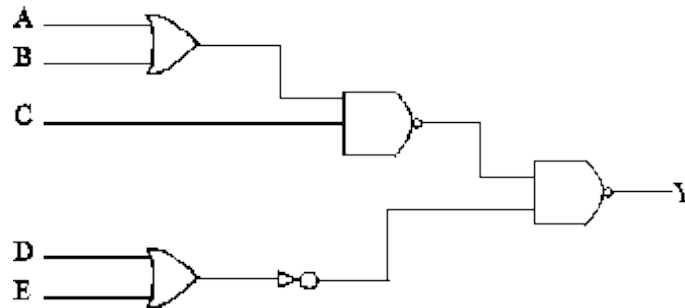
Your Answer is :-

Freshersworld.com Answer is :-c) 1.0A

61. A transistor is operated as a non-saturated switch to eliminate –

Your Answer is :-

Freshersworld.com Answer is :-b) turn – off time

62. The output Y of the circuit in the given figure is –

Your Answer is :-

Freshersworld.com Answer is :-a) (A + B)C + DE

63. Rotors used in a two-phase ac servomotor is –
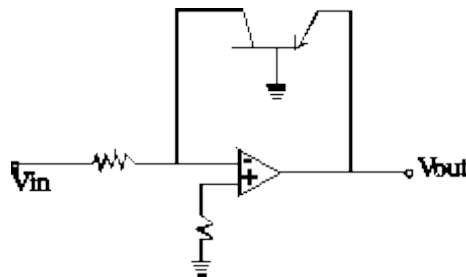
Your Answer is :-

Freshersworld.com Answer is :-d) both b and c

64. Major advantage of TWT over a klystron lies in its –

Your Answer is :-

Freshersworld.com Answer is :-d) higher gain
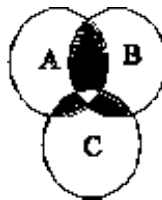
65. The op-map circuit shown in the given figure can be used for –

Your Answer is :-

Freshersworld.com Answer is :-d) multiplication

66. The Boolean expression for the shaded area in the given Venn diagram is –
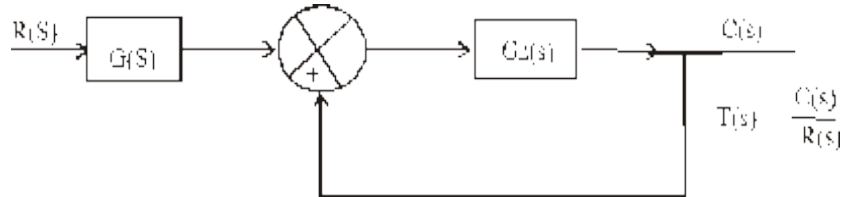

Your Answer is :-

Freshersworld.com Answer is :- a. AB+BC+CA

67. A lag compensator is basically a –

Your Answer is :-

Freshersworld.com Answer is :-c) low pass filter

68. Transfer function T (S) of the system in the given fig is-

Your Answer is :-

$$a.\ T(s) = \frac{G_1(s)G_2(s)}{1-G_2(s)}$$

Freshersworld.com Answer is :-

69. The overall transfer function for a unity feedback system is

$$\frac{4}{S^2 + 4S + 4}$$

Mark the correct statement regarding this system

1. Position error constant k_p for the system is 4

2. The system type one.

3. The velocity error constant k_v for the system is finite.

Select the correct answer using the codes given below-

Codes

Your Answer is :-

Freshersworld.com Answer is :-d) 1 and 3

70. If the rotor's resistance and reactance are respectively R and X_1 its length and diameter are L and D for two phase a) c) servomotor, then-

Your Answer is :-

$$c.\ \frac{X}{R}\ is\ small\ but\ \frac{L}{D}\ is\ large$$

Freshersworld.com Answer is :-

71. In a PID controlles the transfer function G(s) is-

Your Answer is :-

$$a.\ K\left(1 + \frac{1}{T_{1}s} + T_{d}s\right)$$

Freshersworld.com Answer is :-

$$\frac{600}{S(S+1)(S+15)(S+20)}$$

72. Transfer function   can be approximated by the system-

Your Answer is :-

$$a. \quad \frac{2}{S(S+1)}$$

Freshersworld.com Answer is :-

73. The transfer function of an amplifier is given by

$$Av = \frac{V_o}{V_s} = \frac{2810}{\left(1+J\dfrac{f}{585\times10^5}\right)\left(1+j\dfrac{f}{585\times10^6}\right)}$$

The high 3 db frequency of an amplifier will be approximately-
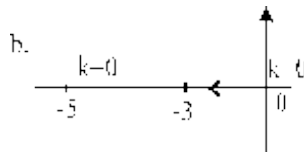
Your Answer is :-

Freshersworld.com Answer is :-a) 5850 kHz

74. An open loop transfer function is given by

$$\frac{K(S+3)}{S(S+5)}$$ Its – loci will be-

Your Answer is :-

Freshersworld.com Answer is :-

75. The output signals amplitudes for 1's and 0's in an ADM transmission systems are –

Your Answer is :-

Freshersworld.com Answer is :-d) Variable but the repetition rate is fixed

76. Microwave link repeaters are typically 50km apart –

Your Answer is :-

Freshersworld.com Answer is :-c) Because of the earth's curvature

77. The amplifier inserted at intervals to amplify the signal and compensate for transmission loss on the cable are called-

Your Answer is :-

Freshersworld.com Answer is :-d) repeaters.

78. Diversity reception in used to-

Your Answer is :-

Freshersworld.com Answer is :-c) overcome degrading effect of fading

79. Mark out transferred electron device in the following-

Your Answer is :-

Freshersworld.com Answer is :-c) Gunn divde

80. In the output of a normal monochrome receiver video detector voltages, which are not found, are -

Your Answer is :-

Freshersworld.com Answer is :-c) sweep

81. The HV anode supply for the picture tube of TV receiver is generated in the-

Your Answer is :-

Freshersworld.com Answer is :-c) horizontal output stage

82. In antenna measurements using two aperture antennas of dimensions D_1 and D_2, minimum separation between the two should be (x is free space wavelength of radiation uses)

Your Answer is :-

$$C. \quad \left(\frac{D_1^2 + D_2^2}{x} \right)$$

Freshersworld.com Answer is :-

83. The frquency range for satellite broad casting is –

Your Answer is :-

Freshersworld.com Answer is :-c) 3 GHz – 30 GHz

84. Iris is used to –

Your Answer is :-

Freshersworld.com Answer is :-c) Over come mismatch error

85. In schotty barrier diode current flows because of –

Your Answer is :-

Freshersworld.com Answer is :-b) Minority carriers

86. Which antennas are used in microwave communication –

Your Answer is :-

Freshersworld.com Answer is :-c) Parabolaidal antennas

87. Among translator & time of sight system capacity –

Your Answer is :-

Freshersworld.com Answer is :-a) Of translator is more

88. No of T-state required for memory read or write operation-

Your Answer is :-
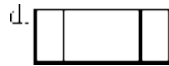
Freshersworld.com Answer is :-b) 3

89. In data transfer operation which flag get affected)-

Your Answer is :-

Freshersworld.com Answer is :-d) none

90. In flowchart which figure represents process like subroutine-

Your Answer is :-

Freshersworld.com Answer is :- .

91. The storage and retrieval of data on stacks should follow sequence-

Your Answer is :-

Freshersworld.com Answer is :-a) last in first out

92. While executing program microprocessor checks INTR line clearing-

Your Answer is :-

Freshersworld.com Answer is :-a) each instruction

93. In which error check technique of data communication 2's complement of all bytes of data is transmitted with data-

Your Answer is :-

Freshersworld.com Answer is :-c) check scans

94. Program execution hierarchy decides which operator-

Your Answer is :-

Freshersworld.com Answer is :-b) is used first

95. $(375)_{10} = (----)_8$

Your Answer is :-

Freshersworld.com Answer is :-c) 567

96. To obtain 2048 $\times$ 8 memory using 128 $\times$ 8 memory chip how many IC required-

Your Answer is :-

Freshersworld.com Answer is :-d) 16

97. A Decimal no. 17 can be converted in binary, the binary no. will be.-

Your Answer is :-

Freshersworld.com Answer is :-a) 10001

98. Is the Universal logic gate-

Your Answer is :-

Freshersworld.com Answer is :-c) NAND

99. A monostable state in multivibrator means-

Your Answer is :-

Freshersworld.com Answer is :-a) which returns itself to its single stable state

100. For designing binary counter which flip flop is preferred -

Your Answer is :-

Freshersworld.com Answer is :-c) D FF

101. His handwriting was not ----- so I could not read his note –

Your Answer is :-

Freshersworld.com Answer is :-d) legible

102. They started to ----- people into the theatre only at six -

Your Answer is :-

Freshersworld.com Answer is :-b) admit

103. I told him to buy things that are <u>lasting</u> (Give the appropriate synonym of the underlined word).

Your Answer is :-

Freshersworld.com Answer is :-c) durable

104. Give the word which is most opposite in meaning of the word 'evident'-

Your Answer is :-

Freshersworld.com Answer is :-a) doubtful

105. I expressed by disagreement ------ him on that issue-

Your Answer is :-

Freshersworld.com Answer is :-b) with

106. 'Sugarbowl' of the world is -

Your Answer is :-

Freshersworld.com Answer is :-b) Cuba

107. Palk strait separates-

Your Answer is :-

Freshersworld.com Answer is :-a) India and Srilanka

108. The minimum number of atoms in a molecule of an element are-

Your Answer is :-

Freshersworld.com Answer is :-a) 1

109. Tides in the sea are caused by-

Your Answer is :-

Freshersworld.com Answer is :-c) combined effect of moon and sun

110. The Bar council of India decided to close over law colleges across the country for their failure to maintain minimum teaching standard) There number is

Your Answer is :-

Freshersworld.com Answer is :-c) 150

111. Aswan Dam is located in-

Your Answer is :-

Freshersworld.com Answer is :-a) Egypt

112.Ghana Birds sanctuary is in the state of -

Your Answer is :-

Freshersworld.com Answer is :-a) Rajasthan

113. Dry ice is-

Your Answer is :-

Freshersworld.com Answer is :-b) Frozen carbon dioxide

114. East flower river of India is -

Your Answer is :-

Freshersworld.com Answer is :-a) Cauvery

115.The total length of the great wall of China is –

Your Answer is :-

Freshersworld.com Answer is :-a) 1,400 miles

116. Deficiency of vitamin C may result in-

Your Answer is :-

Freshersworld.com Answer is :-d) Scurvy

117.Bharat Shah a film financer was granted bail by Supreme Court after a period of –

Your Answer is :-

Freshersworld.com Answer is :-d) 15 months

118.Indian local time is based on-

Your Answer is :-

Freshersworld.com Answer is :-b) $82\frac{1}{2}^{0}$ E longitude

119. The two days Shiv Shena Mahashivir of 2002 started at Shirdi on –

Your Answer is :-

Freshersworld.com Answer is :-a) 9th April 2002

120.Which one is a good preservative of food?

Your Answer is :-

Freshersworld.com Answer is :-b) Formaldehyde

BSNL GE-JTO Recruitment Examination
Answers for Test Paper - X

1. For an abrupt junction varactor diode, the dependence of device capacitance (c) on applied reverse bias (V) is given by –

   Your Answer is :-

   Freshersworld.com Answer is :- b.) C a $V^{-1/3}$

2. The main purpose of plating the high frequency inductors and capacitors with silver is to

   Your Answer is :-

   Freshersworld.com Answer is :-b.) Reduce their ac resistances

3. In a semiconductor the measurement of Hall coefficient provides information on the –

   Your Answer is :-

   Freshersworld.com Answer is :-d.)Sign and concentration of charge carriers

4. In electrical machines, laminated cores are used with a view to reduce –

   Your Answer is :-

   Freshersworld.com Answer is :-b.) Eddy current loss

5. In a cable the voltage stress is maximum at the surface of the –

   Your Answer is :-

   Freshersworld.com Answer is :-b.) conductor

6. The series equivalent resistance value in case of a lossy capacitor will be –

   Your Answer is :-

   Freshersworld.com Answer is :-c.) Large

7. One of the following material which has negative temperature coefficient of resistance is-

   Your Answer is :-

   Freshersworld.com Answer is :-d.) Carbon

8. The input impedance of a CRD is nearly –

   Your Answer is :-

   Freshersworld.com Answer is :-d.) around one mega ohm

9. In order to convert intrinsic semiconductors into extrinsic ones, the level of doping required is about –

   Your Answer is :-

   Freshersworld.com Answer is :-c.) 1 : 10^8

10. One of the following, which is not a transducer in the true sense, is –

    Your Answer is :-

    Freshersworld.com Answer is :-d.)LCD

11. The threshold voltage of a MOSFET can be lowered by –

    Your Answer is :-

    Freshersworld.com Answer is :-c.)Both a & b

12. The resistance of a metallic wire would –

Your Answer is :-

Freshersworld.com Answer is :-b.) Decrease as the operating frequency increases

13. One of the following statements which is correct regarding the two transistor model of the p-n-p-n four layer device is –

Your Answer is :-

Freshersworld.com Answer is :-d.)It explains all the regions of the device characteristics.

14. The gain-band width product of a junction transistor is affected to a maximum extent by –

Your Answer is :-

Freshersworld.com Answer is :-d.)Base emitter diffusion capacitance

15. The modulation of effective base width by collector voltage is known as early effect, hence reverse collector voltage –
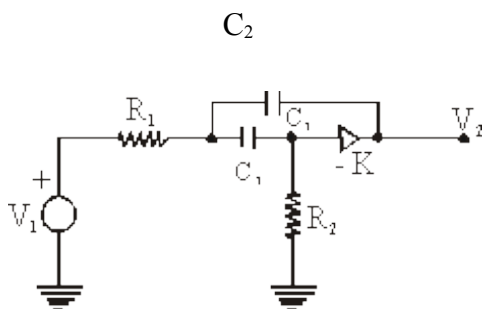
Your Answer is :-

Freshersworld.com Answer is :-c.) Increases alpha but decreases beta

16. One of the following theorem which is the manifestation of the law of conservation of energy is –

Your Answer is :-

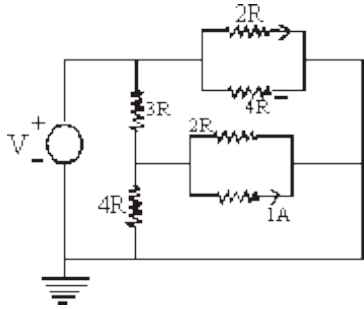Freshersworld.com Answer is :-a.)Tellegen's theorem

17. The network shown in the fig. represents a :

Your Answer is :-indeterminable due to inadequate data1

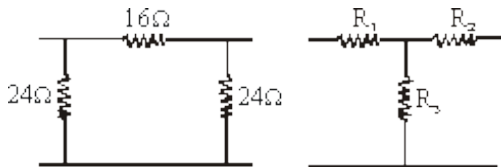Freshersworld.com Answer is :-a.) band-pass filter

18. For the circuit shown in the fig. the current I is –

Your Answer is :-

Freshersworld.com Answer is :-d.) 8A

19. When the π network of figure – I and T-network of figure – II are equivalent then the values of R_1, R_2 and R_3 will be respectively –

Your Answer is :-

Freshersworld.com Answer is :-b) 6Ω , 6Ω and 9Ω

20.. When two identical 3v, 1Ω batteries are connected in parallel with like polarity to like then the Norton equivalent circuit of this combination is –

Your Answer is :-

Freshersworld.com Answer is :-d.) 6A, 0.5Ω

21. The dominate mode in a waveguide is characterized by-

Your Answer is :-

Freshersworld.com Answer is :-a.)Longest cut off wavelength

22. The antenna most commonly used for TV broadcasting in the UHF band is

Your Answer is :-

Freshersworld.com Answer is :-c.) Yagi antenna

23. The crossed dipoles in turnstile antenna are excited with voltage such that the phase shift between the voltage is-

Your Answer is :-

Freshersworld.com Answer is :-c.) 90^0

24. The channel required for FM telemetry is-

Your Answer is :-

Freshersworld.com Answer is :-c.) 100 Times that required for AM telemetry

25. When the input impedance of loss-less transmission line is 100 ohms when terminated in a short circuit and 64 ohms when terminated in an open circuit, then the input impedance of the line is

   Your Answer is :-

Freshersworld.com Answer is :-a.) 80 W

26. Evanescent mode attenuation in a waveguide depends upon the-

   Your Answer is :-

$$d. \ 8\sqrt{5} \ GHz$$

   Freshersworld.com Answer is :-

27. Out of the following the one that mostly reflects the high frequency radio waves is-

   Your Answer is :-

   Freshersworld.com Answer is :-d.) F_2

28. One of the following which is not a wide band antenna is-

   Your Answer is :-

   Freshersworld.com Answer is :-a.) Marconi

29. The power carried by an electromagnetic wave traveling in free space changes with distance 'd' in proportion to-

   Your Answer is :-

   Freshersworld.com Answer is :-c.) $1/d^2$

30. In a FM receiver, the channel bandwidth is around-

   Your Answer is :-

   Freshersworld.com Answer is :-d.) 200 KHz

31. When the power of transmitter is doubled, then the field strength at a point will go up by-

   Your Answer is :-

   Freshersworld.com Answer is :-c.) 3 dB

32. In any transmitting antenna system, efficiency primarily depends upon-

   Your Answer is :-

   Freshersworld.com Answer is :-b.) Radiation resistance

33. The signal to quantisation noise ratio in a PCM system depends upon –

   Your Answer is :-

   Freshersworld.com Answer is :-b.) number of quantisation levels

34. Q. is –

   Your Answer is :-

   Freshersworld.com Answer is :-b.) inversely proportional to damping factor.

35. A dry cell is a –

Your Answer is :-

Freshersworld.com Answer is :-c.) time-varying and active device

36. A digital frequency counter can be converted to a DVM by addition of a stage of suitable –

Your Answer is :-

Freshersworld.com Answer is :-b.) D/A converter to it

37. A 0 to 200 V dc moving coil voltmeter has a guaranteed accuracy of 0.75 % of full scale reading. The voltage measured by instrument is 100V. The limiting error is –

Your Answer is :-

Freshersworld.com Answer is :-c.)1.5%

38. The dynamic characteristics of capacitive transducers are similar to those of a –

Your Answer is :-

Freshersworld.com Answer is :-b.) high pass filter

39. The temperature coefficient of resistance for a thermistor is –

Your Answer is :-

Freshersworld.com Answer is :-c.) high and negative

40. Which of the following types of transducers can be used for measurement of an angular position is –

Your Answer is :-

Freshersworld.com Answer is :-d.) both a and b

41. A 300V full-scale deflection voltmeter has an accuracy of ± 2 %. When it reads 222V. The actual voltage –

Your Answer is :-

Freshersworld.com Answer is :-c.)Lies between 216V and 228V

42. In a thyristor, ratio of latching current to holding current is-

Your Answer is :-

Freshersworld.com Answer is :-c.) 2.5

43. In a single-phase full converter bridge the average output voltage is given by-

Your Answer is :-

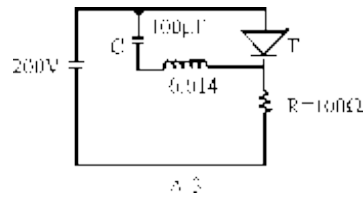$$\int_{\alpha-(\pi/2)}^{\alpha+\pi/2} V_m \cos\theta . d\theta$$

Freshersworld.com Answer is :-c.

44. A 3 phase semi converter can work as-

Your Answer is :-

Freshersworld.com Answer is :-a.) converter for $a = 0^0$ to 180^0

45. In the given arrangement A-3 the circuit is initially in steady stale with thyristor T off. At the moment thyristor T is turned on the thyristor current is –

Your Answer is :-

Freshersworld.com Answer is :-b.) 22 A

46. In dc choppers for chopping period T, the out put voltage can be controlled by FM by varying-

Your Answer is :-

Freshersworld.com Answer is :-c.) T keeping T $_{off}$ constant

47. In synchronized UJT friggering of an SCR, voltage Vo across capacitor reaches UJT threshhold voltage thrice in each half cycle so that there are three firing pulses during each half cycle. The firing angle of the SCR can be controlled.

Your Answer is :-

Freshersworld.com Answer is :-a.) once in each half cycle.

48. When a series LC circuit is connected to a dc supply of V volt through a thyristor, then the peak current through thyristor is-

Your Answer is :-

$$c. \ V. \ \sqrt{\frac{C}{L}}$$

Freshersworld.com Answer is :-

49. In a single phase voltage controller with RL load, ac output power can be controlled if

Your Answer is :-

Freshersworld.com Answer is :-b.)

50. Class C amplifier is mainly used as-

Your Answer is :-

Freshersworld.com Answer is :-a.) As an RF amplifier

51. Parasitic oscillations in amplifiers are caused by-

Your Answer is :-

Freshersworld.com Answer is :-d.) Transistor inter – junction capacitance

52. The input impedance in a voltage shunt feedback is-

Your Answer is :-

Freshersworld.com Answer is :-a.) decreased

53. The signal/noise (S/N) ratio of an amplifier developing an output voltage of 10 v and a noise voltage of 1 mV is ------ dB

Your Answer is :-

Freshersworld.com Answer is :-d.)80

54. The feedback factor 'BA$_v$' is negative for negative feedback-

Your Answer is :-

Freshersworld.com Answer is :-a.) True

55. For sustaining oscillations in a feedback amplifier the loop gain should be-

Your Answer is :-

Freshersworld.com Answer is :-a.)Zero

56. An operational amplifier has a slew rate of 100 v/ microsecond. For a frequency of 10MHz the maximum value of the sine-wave output voltage will be-

Your Answer is :-

Freshersworld.com Answer is :-d).5v

57. A signal having uniformly distributed amplitude in the interval (-v$_,$+v) is to be encoded using PCM with uniform quantization. The signal to quantizing noise ratio is determined by the-

Your Answer is :-

Freshersworld.com Answer is :-c.) Sampling rate

58. For signal amplitude modulated to a depth of 100 % by a sinusoidal signal power is-

Your Answer is :-

Freshersworld.com Answer is :-c.)3/2 times the power of unmodulated carrier

59. Identify the false statement about MOSFET.

It can deplete in-

Your Answer is :-

Freshersworld.com Answer is :-d.)Depletion only mode

60. The process of conversion from an analog signal to digital signal is known as an –

Your Answer is :-

Freshersworld.com Answer is :- a.) analog to digital conversion

61. TTL circuits are used in main frame computers because of their –

Your Answer is :-

Freshersworld.com Answer is :-a.) fast operating speed

62. When a large number of analog signals is to be converted to digital form, an analog multiplexor is used. The A to D converter suitable in this case will be –

Your Answer is :-

Freshersworld.com Answer is :-c.) successive approximation type

63. Identity wrong rule for binary subtraction ?

Your Answer is :-

Freshersworld.com Answer is :-d.)0 – 1 = -1 with borrow of 1

64. The binary equivalent of 9.375_{10} is –

Your Answer is :-

Freshersworld.com Answer is :-a.) 1001.011_2

65. In FM if transmission bandwidth is doubled then the SNR is-

Your Answer is :-

Freshersworld.com Answer is :- c.) Decreased by one fourth

66. Main memory are of two kinds –

Your Answer is :-

Freshersworld.com Answer is :-a.) ROM and RAM

67. The resolution for n bit system D/A converter is –

Your Answer is :-

$$b. \quad \frac{1}{2^N - 1}$$

Freshersworld.com Answer is :-

68. In a PCM system, the number of quantization level are 16 and the maximum signal frequency is 4KHz. The bit transmission rate is-

Your Answer is :-

Freshersworld.com Answer is :-d) 16K bits /sec

69. Mark out sop in the following-

Your Answer is :-
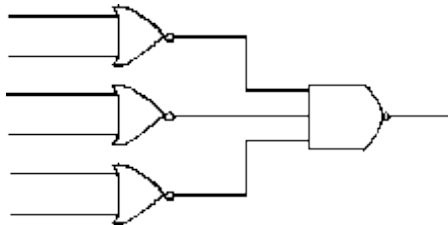
$$b. (A+B)(A+C)+(B+\bar{C})$$

Freshersworld.com Answer is :-

70. The reverse saturation Current I_{CO} in a transistor amplifier-
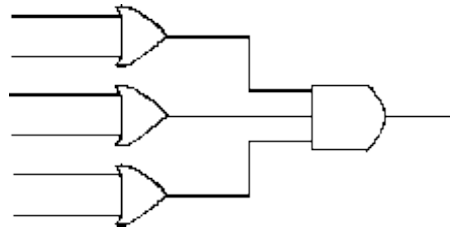
Your Answer is :-

Freshersworld.com Answer is :-a.)doubles for every 10^0C rise in temperature

71. The given circuit is equivalent to –

Your Answer is :-

Freshersworld.com Answer is :-a.)

72. The interface chip used for data transmission between 8086 and a 16-bit ADC is –

Your Answer is :-

Freshersworld.com Answer is :-c.) 8255

73. The output signal amplitudes for1's and 0's in an ADM transmission system –

Your Answer is :-

Freshersworld.com Answer is :-d.) variable but the repetition rate is fixed

74. A composite voltage V = 10 sin 100t + 10cos 100t is applied across a series combination of a capacitor of $1/\mu$ F and a resistance of 10 kΩ . The average power dissipated in the resistance is –

Your Answer is :-

Freshersworld.com Answer is :-a.) 5mW

75. Considering a negative feedback system

$$Where, G(s) = \frac{1}{s+1}, H(s) = \frac{K}{s(s+2)}$$

The closed loop system is stable for

Your Answer is :-

Freshersworld.com Answer is :- d. K < 6

76. Mark the features of the break away point in the root locus of a closed loop control system with the characteristic equation 1+ KG$_1$ (s) H$_1$ (s) = 0

1. It need not always occur only on the real axis.

2. At this point G$_1$(s) H$_1$(s) = 0

3. At this point $\frac{dk}{dx} = 0$

Select the correct answer using codes below.

Your Answer is :-

Freshersworld.com Answer is :-c.) 2 and 3

77. Which of the following components can be used as a rotating amplifier in a control system?

1. An amplidyne

2. A separatively excited dc generator

3. A self excited dc generator

4. A sychro

select the correct answer using codes below-

Your Answer is :-

Freshersworld.com Answer is :-b.) 1 and 2

78. In the formation of Routh's array the situation of a row of zeros indicates that the system-

Your Answer is :-

Freshersworld.com Answer is :-a.) has symmetrically located roots.

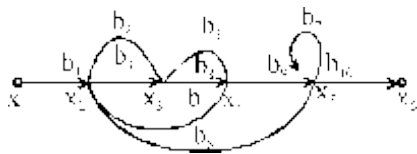79. A 3-port circulator is shown in the figure.

Which one of the following scattering matrices related to this circulator?

Your Answer is :-

$$a. \begin{bmatrix} 0 & 0 & 1 \\ 1 & 0 & 0 \\ 0 & 1 & 0 \end{bmatrix}$$

Freshersworld.com Answer is :-

80. In the given figure a signal flow graph is shown. Consider the statements regarding the signal flow graph-

1. There are three forward paths

2. There are three individual loops

3. There are two non touching loops

of these statements-

Your Answer is :-

Freshersworld.com Answer is :-d.) 1 and 3 are correct

81. Mark out wrong statement.

Modulation is used to-

Your Answer is :-

Freshersworld.com Answer is :-a.)Reduce the bandwidth used

82. The best scanning system for tracking if the target has been acquired is-
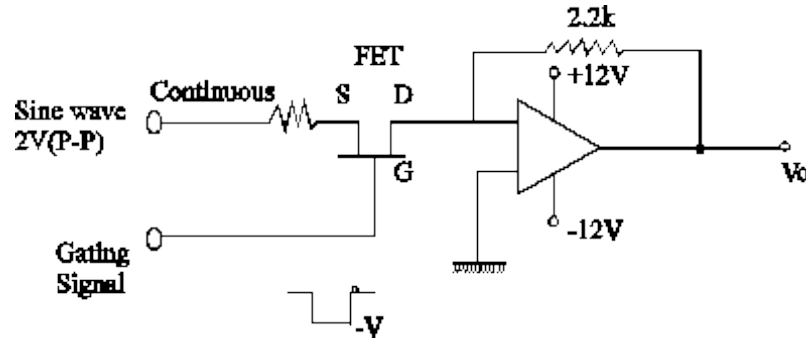
Your Answer is :-

Freshersworld.com Answer is :-d.) monopulse

83. The amplification in parametric amplifiers used in microwave communication system is limited by-

Your Answer is :-

Freshersworld.com Answer is :-b.) cassegranian antenna

84. Gating signal is applied to the circuit as shown in the given figure, to switch the field effect transistor. When gating signal isOV, the output voltage V_O will be-

Your Answer is :-

Freshersworld.com Answer is :-c.) 2Vdc

85. Hamming codes are used for error detection and correction. If the minimum Hamming distance is m, then the number of errors correctable is-

Your Answer is :-

Freshersworld.com Answer is :-b.) less than M/2

86. Mark out a wrong statement for two phase servo motor-

Your Answer is :-

Freshersworld.com Answer is :-b.) The rotor resistance is low

87. 87. The frequency deviation in phase modulation is-

Your Answer is :-

Freshersworld.com Answer is :-a.) independent of the modulating signal frequency

88. A telephone channel has bandwidth B of $3KH_z$ and $SNR\left(\dfrac{S}{nB}\right)$ of 30 dB. It is connected to a Teletype machine having 32 different symbols. The symbols rate required for errorless transmission is nearly-

Your Answer is :-

Freshersworld.com Answer is :-d.) 6000 symbols/s

89. Which power amplifiers has maximum efficiency?

Your Answer is :-

Freshersworld.com Answer is :-d.) Class C

90. Negative resistance characteristics for its operation is used by –

Your Answer is :-

Freshersworld.com Answer is :-d.)MASERS

91. Is a non mark able interrupt-

Your Answer is :-

Freshersworld.com Answer is :-d.) TRAP

92. Instructions in C are of type-

Your Answer is :-

Freshersworld.com Answer is :-c.) 4

93. In C programming character variable can at a time store-

Your Answer is :-

Freshersworld.com Answer is :-a.) 1 character

94. To obtain 16 x 8 memory using 16x4 memory. How many IC required-

Your Answer is :-

Freshersworld.com Answer is :-a.) 16

95. In active low logic, the logic I state corresponds to-

Your Answer is :-

Freshersworld.com Answer is :-b) low voltage level.

96. If JK inputs are tied together, the circuit reduces to-

Your Answer is :-

Freshersworld.com Answer is :-c) T FF

97. For designing half adder are require-

Your Answer is :-

Freshersworld.com Answer is :-d.) a AND gate and a X – OR gate

98. Portly random and portly cyclic sequential access of memory is in-

Your Answer is :-

Freshersworld.com Answer is :-c.) Magnetic Drum

99. A pointer which points the memory address of the current or next instruction is-

Your Answer is :-

Freshersworld.com Answer is :-c.) Program counter

100. For address modification purpose computer uses-

Your Answer is :-

Freshersworld.com Answer is :-b.) Index register

101. Let's go for a walk, . The tag question required for this statement is :

Your Answer is :-

Freshersworld.com Answer is :-a.) Shall we ?

102.He looked very <u>grave</u>

Which of the following words has the closest meaning to the word underlined.

Your Answer is :-

Freshersworld.com Answer is :-b) serious.

103. Sharma did not work ----- so his master asked him to leave-

Your Answer is :-

Freshersworld.com Answer is :-b.) properly

104.Being <u>punctual</u> is necessary in your job. (Substitute the underlined word without changing its meaning) -

Your Answer is :-

Freshersworld.com Answer is :-c). on time

105. Reema said that she had never ----- a book she liked so much.

Your Answer is :-

Freshersworld.com Answer is :-c.) come across

106. The first bullet train is assembled in –

Your Answer is :-

Freshersworld.com Answer is :-a.)South Korea

107.Minister of Parliamentary Affairs and Communications and Information Technology of Government of India is –

Your Answer is :-

Freshersworld.com Answer is :-b.) Pramod Mahajan

108.Chairman of the Cricket Board's Zonal Academics is –

Your Answer is :-

Freshersworld.com Answer is :-a.) N Venkat Rao

109. Romario matched the career total of retired Zico by-

Your Answer is :-

Freshersworld.com Answer is :-d.) 831 goals

110.The best source of Vitamin A is

Your Answer is :-

Freshersworld.com Answer is :-b.) Carrot

111.Titan is the name of the moon related to planet-

Your Answer is :-

Freshersworld.com Answer is :-c.)Saturn

112.Word Environment Day was observed on-

Your Answer is :-

Freshersworld.com Answer is :-c.) 5 June 99

113. Who wrote 'Mudrarakshasa"?

Your Answer is :-

Freshersworld.com Answer is :-b.) Visakhadatta

114.Where were the first Asian Games held?

Your Answer is :-

Freshersworld.com Answer is :-a.) New Delhi

115.Tagore's Gitanjali is-

Your Answer is :-

Freshersworld.com Answer is :-a.)A collection of poems

116. In which year did Mahatma Gandhi launched it first non cooperation movement-

Your Answer is :-

Freshersworld.com Answer is :-d.) 1920

117.In how many years is Khumbh Mela held?

Your Answer is :-

Freshersworld.com Answer is :-e.) 12

118.Panchayat polls held in Jammu and Kashmir after the gap of-

Your Answer is :-

Freshersworld.com Answer is :-d.) 23 years

119.The hardest part in a tooth is-

Your Answer is :-

Freshersworld.com Answer is :-c.) Enamel

120.What is 'Pimpri' famous for?

Your Answer is :-

Freshersworld.com Answer is :-c.) Antibiotics factory

BSNL GE-JTO Recruitment Examination

Answers for Test Paper - VIII

1. When a inductive coil connected to a 200 V, 50Hz ac supply with 10A current flowing through it dissipates 1000 watts then which of the following will have least value in ohms-

    Your Answer is :-Resistance

    Freshersworld.com Answer is :-a.) Resistance

2. Oscillator crystal are made of –

   Your Answer is :-Silicon

Freshersworld.com Answer is :-c.) Quartz

3. For small size, high frequency coils, the most common core material is-

   Your Answer is :-Air

   Freshersworld.com Answer is :-a.)Air

4. If we have a parallel plate capacitor of plate area 'A' and plate separatoin t and having a capacity C and a metallic plate r of area A and of negligible thickness is introduced in the

   $t = \dfrac{t}{M}$

   capacitor at a distance   from either of the two plates as shown in the given figure then the capacity of the capacitor will become –
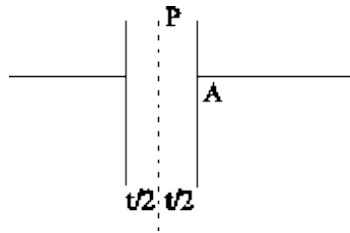
   Your Answer is :-a

   Freshersworld.com Answer is :-c.) 2C

5. A superconductor is a –

   Your Answer is :-A material showing perfect conductivity and Meissner effect below a critical temperature

   Freshersworld.com Answer is :-a.) A material showing perfect conductivity and Meissner effect below a critical temperature

6. When an inductor tunes at 200 KHz with 624 pF capacitor and at 600 KHz with 60.4 pF capacitor then the self capacitance of the inductor would be –

   Your Answer is :-8.05 pF

   Freshersworld.com Answer is :-b) 10.05pF

7. Sparking occur when a load is switched off because the circuit has high –

   Your Answer is :- Inductance

   Freshersworld.com Answer is :-a.) Inductance

8. Sparking between contacts can be reduced by inserting a –

   Your Answer is :-Resistance in the line

   Freshersworld.com Answer is :-c.) Capacitor in parallel with contacts

9. RF amplifier of an A.M. receiver is normally biased in –

   Your Answer is :-Class 'A'

   Freshersworld.com Answer is :-c.) Class 'C'

10. The value of gate voltage for the operation of enhancement of only N channel MOSFET has to be –

Your Answer is :-High positive

Freshersworld.com Answer is :-a.) High positive

11. The input gate current of a FET is –

Your Answer is :-a few microamperes

Freshersworld.com Answer is :-b.) negligibly small

12. In the following fig. with R = 30k, the value of current through 2 K resistor is –

Your Answer is :-25 mA

Freshersworld.com Answer is :-d.) 10 mA

13. A step recovery diode –

Your Answer is :-has on extremely short recovery time

Freshersworld.com Answer is :-c.) is mainly used as a harmonic generator

14. In order to get maximum undistorted output signal from CE amplifier with V_{CC} 10V, the value of V_{CE} (Q) should be approximately-

Your Answer is :- 0.1V

Freshersworld.com Answer is :-b.) 5V

15. In a FET the electrode, which corresponds to collector in bipolar transistor, is –

Your Answer is :-source

Freshersworld.com Answer is :-b.) drain

16. The device which acts like an NPN and a PNP transistor connected base to base and emitter to collector is –

Your Answer is :-Triac

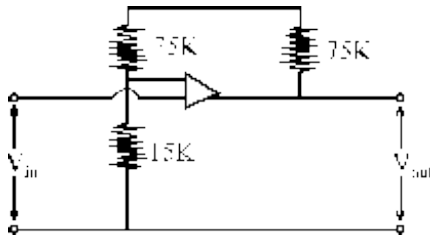Freshersworld.com Answer is :-d.) SCR

17. A typical optical fibre has –

Your Answer is :-High refractive index core and low refractive index cladding

Freshersworld.com Answer is :-b.) Low refractive index core and high refractive index cladding

18. In the following figure circuit diagram of an op-amp based is shown. The ratio   is
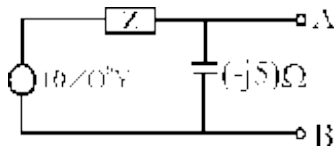
equal to –

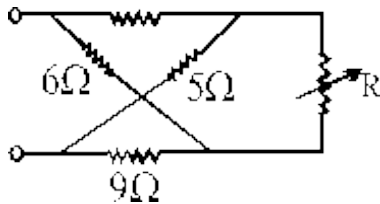Your Answer is :-9

Freshersworld.com Answer is :-b.) 11

19. When a loud speaker is connected across the terminals A and B of the network shown in the fig. then its impedance to obtain maximum power dissipation in it will be –

Your Answer is :-3 – j

Freshersworld.com Answer is :-c.) 7.5 + j 2.5

20. In the lattice network, the value of R for the maximum power transfer to the load –

Your Answer is :-5

Freshersworld.com Answer is :-b.) 6.5

21. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (Z_0 is the characteristic impedance, $\sqrt{}$ is the propagation constant and l is the length of the line-

Your Answer is :-a

Freshersworld.com Answer is :-c.) Z_0 tan h.$\sqrt{}$ l

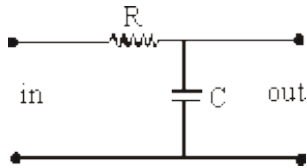22. The approximate thickness of the radome wall should be –

Your Answer is :-a

Freshersworld.com Answer is :-b.) λ /4

23. A relatively permanent information is stored in

Your Answer is :-ROM
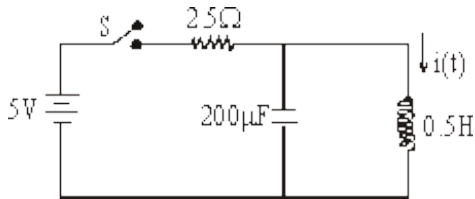
Freshersworld.com Answer is :-c.) PROM

24. The rise time of the RC network shown in the given figure is approximately equal to –

Your Answer is :-a

Freshersworld.com Answer is :- c.) 2RC

25. If in the network shown in the fig. initially a steady state is attained by closing the switch 's' and then if the switch is opened at t = 0, then the current i(t) through the inductor will be –

Your Answer is :-cos50tA

Freshersworld.com Answer is :-b.) 2A

26. When the π network of figure – I and T-network of figure – II are equivalent then the values of R_1, R_2 and R_3 will be respectively –
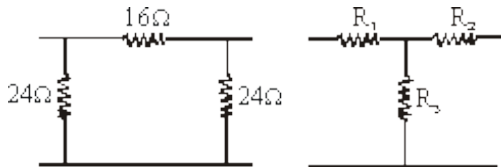
Your Answer is :-9W, 6W and 6W

Freshersworld.com Answer is :-b.) 6Ω , 6Ω and 9Ω

27. When the impedance matrices of a two port networks are given by $\begin{bmatrix} 3 & 2 \\ 2 & 3 \end{bmatrix}$ and $\begin{bmatrix} 15 & 5 \\ 5 & 25 \end{bmatrix}$, then if these two networks are connected in series then the impedance matrix of the resulting two-port network will be –

Your Answer is :-a

b. $\begin{bmatrix} 18 & 7 \\ 7 & 28 \end{bmatrix}$

Freshersworld.com Answer is :-

28. Joule/coulomb is the unit of -

Your Answer is :-Electric field potential

Freshersworld.com Answer is :-b.)   Potential

29. The electric field line and equipotential lines-

Your Answer is :-Are parallel to each other

Freshersworld.com Answer is :-c.) Cut each other orthogonally

30. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (When Z_0 is the characteristic impendence γ is the propagation constant and L is the length of the line

Your Answer is :-a

$$c . \ Z_0 \ \tan \ h\gamma \ell$$

Freshersworld.com Answer is :-

31. When two equal positive point charges are placed along X- axis at X_1 and $-X_1$ respectively then the electric field vector at a point P on the positive Y-axis will be directed-

Your Answer is :-In the +x direction

Freshersworld.com Answer is :-c.) In the +y direction

32. The directions of   and $\overline{H}$ in TEM mode transmission line with respect to the direction

of propagation are-

Your Answer is :-a

Freshersworld.com Answer is :-a.) Both $\overline{E}$. and $\overline{H}$ are transverse to the direction of propagation

33. The lowest TM mode in a rectangular waveguide of cross –section a x b with a>b will be-

Your Answer is :-TM

Freshersworld.com Answer is :-d.)TE_{11}

34. When a transmitter in a free space radiates a mean power of 'p' watts uniformly in all directions then at a distance d sufficiently far from the source in plane the electric field E should be related to p and d as –

Your Answer is :-a

$$d. \ E \ \alpha \ \frac{\sqrt{p}}{d}$$

Freshersworld.com Answer is :-

35. When a dipole antenna was radiating with some excitation in free space radiating a certain amount of the power v if then this antenna is immersed in a lake where water is non-dissipative but has a dielectric constant of 81, then the radiated power with the same excitation will be

Your Answer is :-Decrease to finite non-zero value

36. When a $(75 - j40)\Omega$ load is connected to a coaxial line of $Z_0 = 75\ \Omega$ at 6MHz then the load matching on the line can be accomplished by connecting-

Your Answer is :-A short – circuited stub at the load

37. As compared to analog multimeters, digital multimeters are –

Your Answer is :-less accurate

38. When a signal of 10 mV at 75 MHz is to be measured then which of the following instruments can be used –

Your Answer is :-VTVM

39. Which of the following statement is true about two wattmeter method for power measurement in three phase current ?

Your Answer is :-power can be measured using two wattmeter method only for star connected three phase circuits.

40. When a capacitance transducer has two plates of area 5cm^2 each, separated by an air gap of 2mm than the displacement sensitivity in pf/cm due to gap change would be –

Your Answer is :-11.

41. The Q of a radio coil –

Your Answer is :-is independent of frequency

42. When a generator of 50Ω internal impedance and operating at 1GHz feeds a 75Ω load via a coaxial line of characteristic impedance 50 ohm then the voltage wave ratio on the feed line is –

Your Answer is :-0.

43. The coding system typically used in digital telemetry is –

Your Answer is :-PPM (pulse position modulation)

44. Radiation pyrometers are used for the measurement of temperature in the range of –

Your Answer is :--2000C to 5000C

45. In the given figure band structure is shown. It is of –
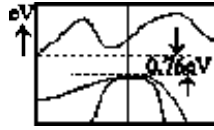
Your Answer is :-Gallium Avesenide (GaAs)

Freshersworld.com Answer is :-a.) Gallium Avesenide (GaAs)

46. When anode is positive with respect to cathode in an SCR, the numbers of blocked p-n junction is –

Your Answer is :-1

Freshersworld.com Answer is :-a.) 1

47. The circuit symbol for a GTO is

Your Answer is :-a

Freshersworld.com Answer is :- b.

48. In the given fig. mark out the type of Cyclo converters

Your Answer is :-1 phase to 1 phase with continuous conduction

Freshersworld.com Answer is :-a.) 1 phase to 1 phase with continuous conduction

49. In the given fig. A-1, C=5, m H and C=20 m F, C is initially charged to 200 V. After the switch.

S is closed at t = 0 the

maximum value of current and the

time at which it reaches this value are respectively.

Your Answer is :-400 A, 15.707 mS

Freshersworld.com Answer is :-a.) 400 A, 15.707 mS

50. In the given circuit the maximum current in the main SCR M can be-

Your Answer is :-200 A

Freshersworld.com Answer is :-b.) 170.7 A

51. The transfer function of an amplifier is given by

The high 3-db frequency of the amplifier will approximately

Your Answer is :-5850 KHZ

Freshersworld.com Answer is :-a.) 5850 KHZ

52. In comparison to full wave rectifier with two diodes the four divide bridge rectifier has the dominant   advantage of -

Your Answer is :-Higher current carrying

Freshersworld.com Answer is :-d.)Lower peak increase voltage require

53. Power output increase in a class-c amplifier-

Your Answer is :-If the conduction angle decrease

Freshersworld.com Answer is :-b).If the conduction angle increase

54. A transistor with h_{ie} = 1.5 k and h_{fe} = 75 is used in an emitter follower circuit where R_1 and R_2 are used for normal biasing . Approximate value of it's current amplification is-

Your Answer is :-77

Freshersworld.com Answer is :-b.)76

55. Amplifier of class B has high theoretical efficiency of 78.5 percent because-

Your Answer is :-It is biased almost to saturation

Freshersworld.com Answer is :-b.)Its quiescent current is low

56. The coupling that produces minimum interference with frequency response is-

Your Answer is :-Direct coupling

Freshersworld.com Answer is :-a.) Direct coupling

57. In the circuit shown in the given figure R_f provides

Your Answer is :-Current series feedback

Freshersworld.com Answer is :-d.)Voltage shunt feedback

58. Mark the correct relation for the junction transistor

Your Answer is :-a

$$c. \; \beta = \frac{\alpha}{1 - \alpha}$$

Freshersworld.com Answer is :-

59. Data in the serial form can be converted into parallel form by using –

Your Answer is :-PISO shift register

Freshersworld.com Answer is :-c.) SIPO shift register

60. PROMs are used to store-

Your Answer is :-bulk information

Freshersworld.com Answer is :-d.) relatively permanent information

61. The horizontal axis in a 3 bit unipolar D/A converter represents-

Your Answer is :-Output bit combination

Freshersworld.com Answer is :-c.) input bit combination

62. 'Not allowed' condition in NAND gate SR flip flop is –

Your Answer is :-s = 0, R = 2

Freshersworld.com Answer is :-a.) s = 0, R = 0

63. Name the fastest logic family-

Your Answer is :-TTL

Freshersworld.com Answer is :-d.) ECL

64. Equation corresponding to De Morgan's theorem in Boolean Algebra is –

Your Answer is :-(A+B) (A+B) = AA + AB + BA + BB

Freshersworld.com Answer is :-

65. In the given fig find radix of the system –

Your Answer is :-2

Freshersworld.com Answer is :-a.) 2

66. Modems are used for data transmission telephone lines to –

Your Answer is :-increase the transmission capacity

Freshersworld.com Answer is :-a.) increase the transmission capacity

67. The figure of a control system is shown. The maximum value of gain K for which the system is stable is-

Your Answer is :-a

Freshersworld.com Answer is :-d.) 5

68. Identify the example of open-loop system-

Your Answer is :-A windscreen wiper

Freshersworld.com Answer is :-a.) A windscreen wiper

69. Consider the following expressions indicating the step or impulse response of an initially relaxed control system-

1. $(5 – 4e^{-2+})$ u(t)

2. $(e^{-2t} +5)$ (u(t))

3. ç (t) $+ 8e^{-2t}$ u(t)

4. ç (t) $+ 4e^{-2t}$ 4(t)

Those which correspond to the step and impulse response of the same system include-

Your Answer is :-1&5

Freshersworld.com Answer is :-a.) 1&3

70. A system is described by

To test its stability by Lyapunov's method the following V functions are considered.

Mark the most suitable V-function in this case-

Your Answer is :-Only V

Freshersworld.com Answer is :-c.) Both V_1 and V_2

71. Identity the polar plot of a typical type zero system with open loop transfer function

Your Answer is :-a

Freshersworld.com Answer is :-

72. The scattering matrix of a magic –tee shown in the given figure is-

Your Answer is :-a

Freshersworld.com Answer is :-

73. Which is the following relate to rational transfer function of a system-

1. Ratio of Fourier transform of output to input with zero initial conditions.

2. Ratio of Laplace transform of output to input with zero initial conditions.

3. Laplace transform of system impulse response.

4. Laplace transform of system unit step response select the correct answer using the codes given below.

Codes

Your Answer is :-1 and 4

Freshersworld.com Answer is :-a.) 1 and 4

74. For the signal g (t) – 10 cos (50 pt) $\cos^2$ (150at)

The Nyquist sampling state in t seconds is

Your Answer is :-150 samples per second

Freshersworld.com Answer is :-d.) 350 samples per second

75. In the case of a 70 MHz 1F carries for a transponder band width of 36 MHz; energy must lie between – MHz.

Your Answer is :-34 and 143

Freshersworld.com Answer is :-b.) 52. And 88

76. Radar used to eliminate clutter in navigational application is –

Your Answer is :-Pulse radar

Freshersworld.com Answer is :-c.) MTI radar

77. The 1.55 mm windows is not yet in use with fiber optic systems because –

Your Answer is :-The attenuation is higher than at 0.85 mm

Freshersworld.com Answer is :-c.) Suitable laser devices have not yet been developed

78. Pre-emphasis in FM systems involves-

Your Answer is :-Compression of the modulating signal

Freshersworld.com Answer is :-d.) Amplification of higher frequency components of the modulating signal.

79. In a terrestrial microwave system transmission of signals is achieved through-

Your Answer is :-reflection from the ionosphere

Freshersworld.com Answer is :-b.) line of sight mode

80. Casse grain feed is used with a parabolic reflector to

Your Answer is :-increase the gain of the system

Freshersworld.com Answer is :-d.) allow the feed to be placed at a convenient point.

81. In most microwave communication link rain drop attenuation is caused due to-

Your Answer is :-scattering of microwaves by water drops of specific size.

Freshersworld.com Answer is :-c.) absorption of microwaves by water and consequent heating of the liquid

82. Circuit in the given figure represents. –

Your Answer is :-an astable multivibrator

Freshersworld.com Answer is :-a.) an astable multivibrator

83.   . D = r is-

    Your Answer is :-Maxwell's 1st equation

    Freshersworld.com Answer is :-c.) Maxwell's III equation

84. In a rectangular wave-guide which TM mode exists-

    Your Answer is :-TM

    Freshersworld.com Answer is :-d.) TM_{11}

85. In directional coupler a portion of power two velliry fram port 1) to port 2) is coupled to.

    Your Answer is :-port 4

    Freshersworld.com Answer is :-a). port 4

86. For high power i.e. 10 w to 50 kw measurement –

    Your Answer is :-Barometer are used

    Freshersworld.com Answer is :-d.) Calorimetric watt meter technique used

87. The difference between TWT & klystron is –

    Your Answer is :-In TWT electrons are in contact with RF field for long time & in klystron for short time

    Freshersworld.com Answer is :-a.) In TWT electrons are in contact with RF field for long time & in klystron for short time

88. Which one is most suitable for transmission through wave guide-

    Your Answer is :-Hown antennas

    Freshersworld.com Answer is :-c.) helical antenna

89. The skip distance of microwave is given by –

    Your Answer is :-a

    Freshersworld.com Answer is :-b.)

90. How many general purpose registers 8085µ p-

    Your Answer is :-4

    Freshersworld.com Answer is :-b.) 6

91. 8085 µ P has no. of addressing modes-

    Your Answer is :-2

Freshersworld.com Answer is :-c.) 4

92. What will be status of z and c y flag after execution of SUB A instruction

Your Answer is :- z = 0, cy = 0

Freshersworld.com Answer is :-c.) z = 1, cy = 0

93. Microprocessor accept interrupt only if.

Your Answer is :-interrupt flip flop disabled.

Freshersworld.com Answer is :-c.) interrupt flip flop enabled.

94. Microprogramming is a technique

Your Answer is :-for programming the microprocessor

Freshersworld.com Answer is :-c.) for programming the control steps of computer

95. High level programs like C are converted into machine language with the help of

Your Answer is :- interpreter

Freshersworld.com Answer is :-b.) compiler

96. $(10110011)_2 = (?)8$

Your Answer is :-274

Freshersworld.com Answer is :-b.) 263

97. A Not gate at the output of AND gate converts AND gate into-

Your Answer is :-NAND

Freshersworld.com Answer is :-a.) NAND

98. The O/P of a logic gate is   the gate must be-

Your Answer is :-AND

Freshersworld.com Answer is :-d.) X-OR

99. A symbol of JK flip flop is-

Your Answer is :-a
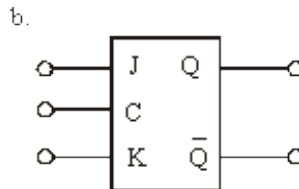
Freshersworld.com Answer is :-

100. A demultiplener-

Your Answer is :-has multiple i/p and single o/p

Freshersworld.com Answer is :-b.) has multiple i/p and multiple o/p

101. Which of the following best describes the authour`s attitude toward fairy tales ?

Your Answer is :-fascination

102. What type of sentence is this ?

Hurray! We won the match

Your Answer is :-Exclamatory

Freshersworld.com Answer is :-a.) Exclamatory

103. Before which of the following word will you put 'a'

Your Answer is :-hour

Freshersworld.com Answer is :-d.) Man

104. The noun form of 'fresh' is –

Your Answer is :-freshly

Freshersworld.com Answer is :-c.) fresheners

105. The word 'clang' is an example of –

Your Answer is :- Simile

Freshersworld.com Answer is :-c.) onomatopoeia

106. The Forbes magazine acclaimed Azim Premji as richest India's is the chairman of-

Your Answer is :-Pentafour software

Freshersworld.com Answer is :-d.) Wipro

107. Bharat Ratna award for the year 2001 goes to-

Your Answer is :-Lata Mangeshkar and Zakeer Hussain

Freshersworld.com Answer is :-c.) Bismillah Khan and Lata Mangeshkar

108. Mr. George W-Bush takes over as ------ President of the united states of America succeeding Mr. Bill Clinton-

Your Answer is :-42nd

Freshersworld.com Answer is :-b.) 43rd

109. New Chief Minister of Pondicherry is-

Your Answer is :-T. Venkat Naidu

Freshersworld.com Answer is :-c.) N. Rengaswany

110. No court has the jurisdiction to interfere with the election process once set in motion by the Election commission. This is enshrined in Article-

Your Answer is :-366

Freshersworld.com Answer is :-b.) 329

111. Ostrich is a-

Your Answer is :-Running bird

Freshersworld.com Answer is :-a.) Running bird

112. The main atmospheric gas responsible for green house is-

Your Answer is :-Oxygen

Freshersworld.com Answer is :-d.) Carbon-dioxide

113. Which of the following is not a Kharif Crop-

Your Answer is :-Rice

Freshersworld.com Answer is :-d.) gram

114. The function of World Bank is to-

Your Answer is :-Help in reconstruction and development of world economy

Freshersworld.com Answer is :-a.) Help in reconstruction and development of world economy

115. Speed of sound is maximum in-

Your Answer is :-Water

Freshersworld.com Answer is :-c.) Steel

116. "Long years ago we made a trust with destiny." Whose words are these-

Your Answer is :-Subhash Chandra Bose

Freshersworld.com Answer is :-b.) Jawaharlal Nehru

117. Durand cup is associated with-

Your Answer is :-Hockey

Freshersworld.com Answer is :-c.) Football

118. Rabindranath Tagore was awarded the Nobel Prize in literature in the year.

Your Answer is :-1915

Freshersworld.com Answer is :-c.) 1913

119. India successfully conducted its first underground nuclear experiment at Pokhran in Rajas than on-

Your Answer is :-May 18,

Freshersworld.com Answer is :-a.) May 18, 1975

120. An emergency loan of $ 500 million to help reconstruct infrastructure in earth quake devastated Gujarat approved by-

Your Answer is :-Asian development Bank

Freshersworld.com Answer is :-a.) Asian development Bank

BSNL GE-JTO Recruitment Examination
Answers for Test Paper - VI

1. At a frequency below the resonant frequency series circuit is-

Your Answer is :-The power factor-Inductive

Freshersworld.com Answer is :- b.) Capacitive

2. The electrical conductivity of metals is typically of the order of (Ohm $^{-1}$ m^{-1}) -
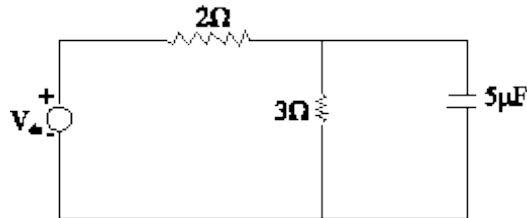
Your Answer is :-The power factor-18

Freshersworld.com Answer is :- a.) 10^7

3. The output of a piezoelectric crystal has-

Your Answer is :-The power factor-Low amplitude and low impedance

Freshersworld.com Answer is :- c.)Low amplitude and high impedance

4. The time constant associated with the capacitor charging in the circuit shown in the given figure is –

Your Answer is :-The power factor-6ms

Freshersworld.com Answer is :- a.)6ms

5. The Q factor of an inductor would be higher if it is made of –

Your Answer is :-The power factor-Thinner wire-

Freshersworld.com Answer is :- b.) Longer wire

6. A cavity resonator can be represented by –

Your Answer is :-The power factor-An LC circuit-

Freshersworld.com Answer is :- a.) An LC circuit

7. Air gap in the iron core of an inductor prevents –

Your Answer is :-The power factor-Core saturation-

Freshersworld.com Answer is :- a.) Core saturation

8. Between the plates of an air capacitor if a glass slab is slipped without moving the plate then -

Your Answer is :-The power factor- Its capacitance is decreased-

Freshersworld.com Answer is :- b.) Its capacitance is increased

9. For current to flow, a circuit must be –

Your Answer is :-The power factor-Isolated-

Freshersworld.com Answer is :- c.) Complete

10. Human ear can detect sound intensities of the order of –

Your Answer is :-The power factor-10-20 w/m

Freshersworld.com Answer is :- b). 10^{-13} w/m^2

11. A FET operates on –

Your Answer is :-The power factor-Majority carriers only-

Freshersworld.com Answer is :- a). Majority carriers only

12. An SCR can conduct for a full half cycle or any part of it –

Your Answer is :-The power factor-and continue conduction for other half cycle-

Freshersworld.com Answer is :- b.) but blocks the conduction for other half cycle

13. In CRT aquadag carries -

Your Answer is :-The power factor-aqueous solution of graphite-
Freshersworld.com Answer is :- a.)aqueous solution of graphite

14. From the following circuit, in order to obtain a 12-v stabilized supply the input to the terminals A and B

should be -
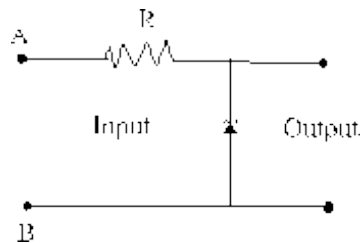
Your Answer is :-The power factor-less than 12v with terminal A positive with respect to terminal B-

Freshersworld.com Answer is :- d.)greater than 12v with A positive with respect to B

15. When the value of I_{CBO} in a silicon transistor of b = 49 is 20 Na then the value of I_{CEO} for a temperature rise of 18^0c would be –

Your Answer is :-The power factor-8mA -

Freshersworld.com Answer is :- a.)8mA

16. MOSFET can operate in –

Your Answer is :-The power factor-Depletion mode-

Freshersworld.com Answer is :- d.)Both a & b

17. For a circuit design the very factor of an SCR, which is to be taken into account is –

Your Answer is :-The power factor-a-

Freshersworld.com Answer is :-

18. The functions of an oxide layer in an IC device is to –

Your Answer is :-The power factor-mask against diffusion or ion implant-

Freshersworld.com Answer is :- d.) all the above

19. One of the following bipolar transistors which has the highest current gain bandwidth product for similar geometry is –

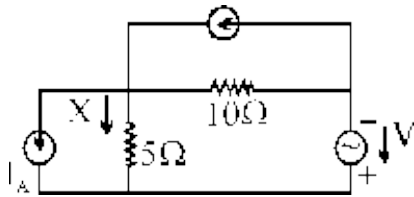Your Answer is :-The power factor-NPN germanium transistor-

Freshersworld.com Answer is :- b.) NPN silicon transistor

20. With the increasing temperature, the electrical conductivity would –

Your Answer is :-The power factor-Increase in metals as well as in intrinsic semiconductors.-

Freshersworld.com Answer is :- c.)Decrease in metals but increase in intrinsic semiconductors.

21. For the following circuit, the current X is 3A then the power delivered by the dependent current source D is –

Your Answer is :-The power factor-50 watts3-

Freshersworld.com Answer is :- c.)1500 watts

22. The current in resistor R shown in the fig. will be –
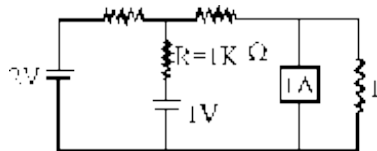
Your Answer is :-The power factor-0.2A-

Freshersworld.com Answer is :- a.) 0.2A

23. In the network shown in the given fig. the capacitor C_1 is initially charged to a voltage V_0 before the switch S in the circuit is closed. In the steady state-
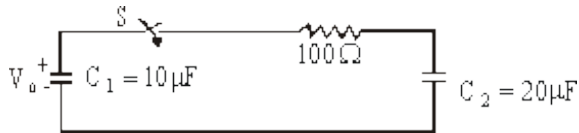
Your Answer is :-The power factor-C1 and C2 are charged to equal voltages-

Freshersworld.com Answer is :- a.)C_1 and C_2 are charged to equal voltages

24. The equivalent circuit of a wire-wound resistor can be represented as –

Your Answer is :-The power factor-a-
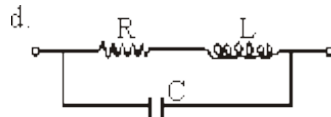
Freshersworld.com Answer is :-

25. For the fig. shown the fundamental cutset for the branch 12 is –
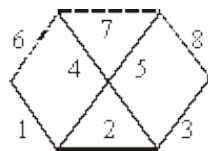
Your Answer is :-The power factor-2, 1, -

Freshersworld.com Answer is :- c.)2, 1, 3, 4,5

26. Ideally, attenuator pads should not change –

Your Answer is :-The power factor-voltage level-

Freshersworld.com Answer is :- b.) impedance level

27. When the two networks are cascaded through an ideal Buffer and if tr_1 and tr_2 are the rise times of the two networks, then the overall delay of the two networks together will be –

Your Answer is :-The power factor-a-

$$c. \; t_{d1} + t_{d2}$$

Freshersworld.com Answer is :-

28. For the network shown in the following fig. one of the following theorems which can be conveniently used to calculate the power consumed by the 10Ω resistor is –
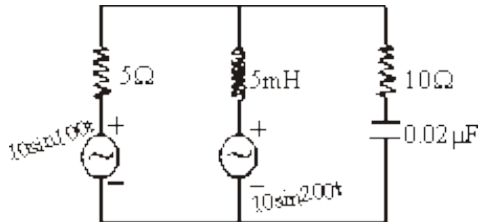
Your Answer is :-The power factor-Thevenin's theorem-

Freshersworld.com Answer is :- c.) Millman's theorem

29. The nodal analysis is primarily based on the application of –

Your Answer is :-The power factor-KVL-

Freshersworld.com Answer is :- d.) Both b and c

30. When the driving point impedance of a network at a frequency of 1Hz is $\sqrt{2j}$ then the impedance can be realised as –

Your Answer is :-The power factor-a-
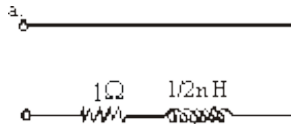
Freshersworld.com Answer is :-

31. For a lossless line-

1. Series resistance is zero 2. Shunt conductance is zero

3. Shunt conductance is infinite   4. Series resistance is infinite

Your Answer is :-The power factor-1 & -
Freshersworld.com Answer is :- a.) 1 & 2

32. When a square wave is fed to an RC circuit then-

Your Answer is :-The power factor-Voltage across R is square and across C is not square-
Freshersworld.com Answer is :- d.) Voltage across both R and C are not square

33. When an A.M. broadcast radio transmitter radiates 10 kw power when the modulation percentage is 60 then the power of the carrier is-

Your Answer is :-The power factor-5.00 kw-
Freshersworld.com Answer is :- c.) 8.47 kw

34. The main components of atmosphere responsible for absorption of em waves are -

Your Answer is :-The power factor-Nitrogen and Oxygen-
Freshersworld.com Answer is :- c.) Oxygen and water vapour

35. The effective height of a linear antenna of length 'l' is say 'x' when the current distribution along it's length is uniform and say, it is 'y' when the current distribution is sinusoidal then x/y is equal to -

Your Answer is :-The power factor-2-
Freshersworld.com Answer is :- d.) p/4

36. In a hollow rectangular waveguide, the phase velocity -

Your Answer is :-The power factor-Increases with increasing frequency-
Freshersworld.com Answer is :- b.) Decreases with increasing frequency

37. For TM waves in a parallel plate waveguide, the minimum attenuation arising from imperfect conductors would occur at a frequency of (f$_c$ is the cut–off frequency)-

Your Answer is :-The power factor-3fc-

$$d. \quad \sqrt{2} \, f_c$$

Freshersworld.com Answer is :-

38. When a transmission line having 50 Ω impedance is terminated in a load of (40 + j30) W then the VSWR is –

Your Answer is :-The power factor-j 0.-
Freshersworld.com Answer is :- b.)0.8 + j 0.6

39. The ionosphere plays a significant role in radio wave propogation at-

Your Answer is :-The power factor-High frequencies-
Freshersworld.com Answer is :- a.)High frequencies

40. When a carrier wave is modulated at 100% it's power is increased by-

Your Answer is :-The power factor-100%-
Freshersworld.com Answer is :- c.)50%

41. Reluctances in series are –

Your Answer is :-The power factor-Subtractive-
Freshersworld.com Answer is :- b.) Additive

42. When the meters X and Y requires 40 mA and 50 mA respectively for full scale deflection then –

Your Answer is :-The power factor-X is more sensitive-
Freshersworld.com Answer is :- c.)both are equally sensitive

43. In the context of ac bridge measurement the term "Wagner Ground" means –

Your Answer is :-The power factor-a special RC connection that eliminates stray magnetic effects.-
Freshersworld.com Answer is :- d.) a special RC connection that eliminates stray capacitance effects.

44. The gating and counting circuits of a digital counter –

Your Answer is :-The power factor-cannot handle MHz signals-
Freshersworld.com Answer is :- b.) cannot handle GHz signals

45. De- sauty bridge is more widely used because of –

Your Answer is :-The power factor-simplicity-
Freshersworld.com Answer is :- a.)simplicity

46. A schottky diode clamp is used along with a switching BJT for –

Your Answer is :-The power factor-reducing the power dissipation.-
Freshersworld.com Answer is :- b.)reducing the switching time

47. The phenomenon of creeping occurs in –

Your Answer is :-The power factor-Energy meters-
Freshersworld.com Answer is :- a.)Energy meters

48. A permanent magnet moving coil measures the –

Your Answer is :-The power factor-true rms value-
Freshersworld.com Answer is :- b.) dc value

49. The D`Arsonval meter movement can be converted into an audio frequency ac ammeter by adding to it a-

Your Answer is :-The power factor-thermocouple-
Freshersworld.com Answer is :- b.) rectifier

50. Which one of the following detectors is generally used in ac bridges for audio frequency range ?

Your Answer is :-The power factor-Ac voltmeter-
Freshersworld.com Answer is :- c.)Headphones

51. In single phase circuit capacitor used for power factor correction decreases –

Your Answer is :-The power factor-The power factor-
Freshersworld.com Answer is :- d.) The line current and increases power factor

52. In the given figure X the balanced bridge should be –
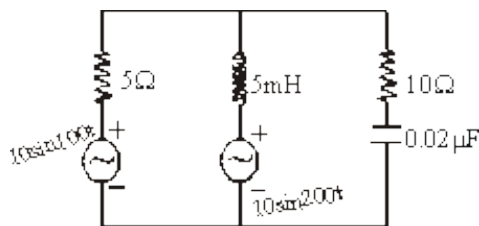
Freshersworld.com Answer is :- a.) A self-inductance having resistance

53. SiO2 layer in an integrated circuit provides –

Your Answer is :-The power factor-The power factor

Freshersworld.com Answer is :- c.)Isolation

54. For an SCR with turn on time of 5 microsecond, an ideal trigger pulse should have-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- c.)short rise time with pulse width = 6 m sec

55. In a 3-phase half wave diode rectifier, the ratio of average output voltage to per phase maximum a c voltage is-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.)0.827

56. In multiple pulse modulation used in PWN inverters, the amplitude and frequency for

triangular carrier and square reference signals are respectively 4V, 6 KH2 and 1V, 1KH2.

The number of pulses per half cycle and pulse width is respectively-.

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.)3, 450

57. A four quadrant operation requires-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) two full converters connected back to back.

58. In voltage source inverters-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.) o does not depend on z where as depends on z

59. 59. For an RC driving – point impedance function, the poles and zeros-Your Answer is :-The power factor--

Freshersworld.com Answer is :- b.) should alternate only on the negative real axis

60. The functions of connecting a resistor in series with gate - cathode circuit and a zener diode across gate cathode circuit are, respectively to protect the gate circuit from-
Your Answer is :-The power factor--
Freshersworld.com Answer is :- b.)over currents over voltages.

61. The plate efficiency of a class C amplifier is high because-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- c.) The plate current flows only when grid is driven positive

62. The circuit diagram shown in the figure consist of transistor is -

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.) Parallel connection

63. Increase of current in one transistor in a direct coupled circuit -

Your Answer is :-The power factor--

Freshersworld.com Answer is :- d.)May either increase or decrease currents of other transistors connected in the circuit.

64. In a PNP transistor the charge carriers in the base region which play an important role in the operation of the transistor are-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- b.) The minority carriers

65. Voltage gain in a CC amplifier is-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.)Cannot exceed unity

66. Random-access-memory means –

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.)memory in a random fashion

67. BCD code is –

Your Answer is :-The power factor--

Freshersworld.com Answer is :- b.)a binary code

68. The transfer function of a system is $\dfrac{10(1+0.2s)}{1+0.5s}$. The phase swift at w = 0 and w = a will be -

Your Answer is :-The power factor-

Freshersworld.com Answer is :- a.) 900 and –00

69. Number of resolutions in a 8 bit D/A converter is –

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.)8 bit

70. A bistable multivibrator is used as a –

Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.) Frequency divider

71. The transfer function of a system is $\dfrac{10(1+0.2s)}{1+0.5s}$ The phase shift at w = o and w = will be –

Your Answer is :-The power factor-

Freshersworld.com Answer is :- a.)900 and -00

72. A forward path transfer function of a unity feedback control system is equal to The unit step response of this system starting from rest will have its maximum value at a time equal to –

Your Answer is :-The power factor-

Freshersworld.com Answer is :- d.) infinity.

73. To obtain the output position in a position control system, which one of the following transducers is used-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.)Synchro

74. The maximum resonance peak for the second order transfer function T(S) = $\dfrac{4}{S^2 + 2s + 4}$ will be –

Your Answer is :-The power factor-

Freshersworld.com Answer is :- $d. 2/\sqrt{3}$

75. Considering control system in the given fig .
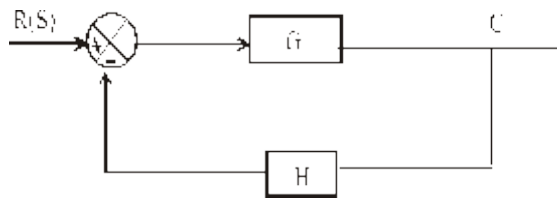
For slight variation in G, the ratio of open loop sensitivity to closed pool sensitivity will be given by-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) 1 : (1+GH)-1

76. The diversity system in Troposcatter links is made use of to-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- d.) Detect signal in the presence of fading.

77. Mark out wrong statement regarding compandor-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.) For weaker signals, it gives a poor ratio of signal strength to quantizing error.

78. In a communication system noice is most likely to affect the signal-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) In the channel

79. In a communication system noice is most likely to affect the signal-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) In the channel

80. The given circuit is a –

Your Answer is :-The power factor-

Freshersworld.com Answer is :- a.) Monostable multivibrator

81. In a plane transverse electromagnetic wave-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.)Angle between electric and magnetic vectors is 900

82. Directional coupler is a function of-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) Four port wove guide

83. Isolators are used to couple generator and load because –Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) To match any load with generator

84. In travelling wave tube for getting amplified output -

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) Both electron beam and RF field travels in same direction

85. Crystal diode works on principle of –Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.)Square low

86. In gunn effect oscillator which mode having lowest operating frequency –Your Answer is :-The power factor-

   Freshersworld.com Answer is :- a.)Domain mode

87. In Reflex klystron maximum energy transferred to gap by electrons-

   Your Answer is :-The power factor-

   Freshersworld.com Answer is :- d.)eR , ee, el

88. The radio waves get absorbed by atmosphere depends –Your Answer is :-The power factor-

   Freshersworld.com Answer is :- d.) Frequency of waves

89. 8085 mP has no of sets of communication lines-

   Your Answer is :-The power factor-

   Freshersworld.com Answer is :- b.) 3

90. 8085 mP has no of sets of communication lines-

   Your Answer is :-The power factor-

   Freshersworld.com Answer is :- b.) 3

91. Is two byte instruction-

   Your Answer is :-The power factor--

   Freshersworld.com Answer is :- c.) MV I B, 92 H

92. Banch instructions-

   Your Answer is :-The power factor-

   Freshersworld.com Answer is :- a.) only uses flogs setting to make decision.

93. What will be the time delay achieved from following loop-

   Loop   DCX   B   6

          MOV   A, C,   4

          ORA   B   4

          JNZ   Loop   10

          system clock freg. = 2 MHz.

   Your Answer is :-The power factor-

   Freshersworld.com Answer is :- b.)12 m s

94. After execution of pop statement-

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- d.)Stack pointer incremented by 1

95. Labels are used as an alternative for-

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- c.) Memory address

96. Microprogramming is a technique-

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- c.)For programming the control steps of computer

97. 00110010 – 01000101 =?

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- b.)11101101

98. A write cycle time means-

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- a.) Minimum length of write pulse

99. A write cycle time means-

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- a.) Minimum length of write pulse

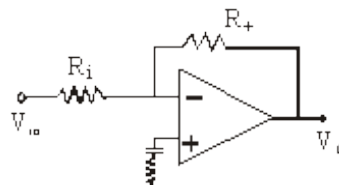100. If three i/p of a gate are 1, 0, 1 then output is O the gate must be-

    Your Answer is :-The power factor--

    Freshersworld.com Answer is :- b.) AND

101. Inverting amplifier configuration using operational amplifier is –

    Your Answer is :-The power factor-

d.

    Freshersworld.com Answer is :-

102. Which logic family is most faster-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.) ECL

103. For getting positive o/p from two i/p OR gate for positive logic-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- c.) any one of i/p must be positive

104. Supercilious is –

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.)Harighty

105. Give the synonym of 'moribund'-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- d.) Dying

106. The convention was to end on May 13 with a month long break in between. What do the two prepositions indicate?

Your Answer is :-The power factor--

Freshersworld.com Answer is :- b.) Time

107. According to the writer what influences our dreams-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a.)inner censorships

108. Vaunted is –Your Answer is :-The power factor--

Freshersworld.com Answer is :- c.)Belittled

109. The sun rays falls vertically on -

Your Answer is :-The power factor--

Freshersworld.com Answer is :- d.) Equator

110. Trimurti is associated with -

Your Answer is :-The power factor-

Freshersworld.com Answer is :- d.) Elephant caves

111. In which year did the congress adopt "Poorna Swaraj" or complete independence as its goal?

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b.) 1929

112.Director of CBI-

Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.) P.C Sharma

113.Rajiv Gandhi khel Ratna award for the year 2001 goes to -

Your Answer is :-The power factor-

Freshersworld.com Answer is :- a.) P. gopichand

114.During which time is vist to Mecca treated as Haj?

Your Answer is :-The power factor-

Freshersworld.com Answer is :- b) Id-ul-Zuha

115.Of the 109 known metals, how many occur in nature and how many are produced

synthetically in particle accelerators!

Your Answer is :-The power factor-

Freshersworld.com Answer is :- c.)95 and 14

116.Earth's average speed per second around the sun is -

Your Answer is :-The power factor-

Freshersworld.com Answer is :- a.) 30 km

117. The first pope to enter a mosque in Damascus syria is -

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a)Pope John Paul II

118.. The first pope to enter a mosque in Damascus syria is -

Your Answer is :-The power factor--

Freshersworld.com Answer is :- a)Pope John Paul II

119.Uranium is found in the state of -

Your Answer is :-The power factor--

Freshersworld.com Answer is :- d.)Bihar

120.Nuclear Power plant in Pakistan is located at-

Your Answer is :-The power factor--

Freshersworld.com Answer is :- c.)Ellipse

Answers for Test Paper - VII

1. At a frequency below the resonant frequency parallel circuit is -

   Your Answer is :-

   Freshersworld.com Answer is :- a) Inductive

2. Which of the following are piezo-electric substances-

   Your Answer is :-

   Freshersworld.com Answer is :-d) All the above

3. 3. The resolution of a logic analyser is -

   Your Answer is :-

   Freshersworld.com Answer is :-d) The minimum amplitude of input signal it can display

4. In a P-type semiconductor, the conductivity due to holes ($=s_p$) is equal to (e=charge of hole, m_p = hole mobility, P = hole concentration)-

   Your Answer is :-

   Freshersworld.com Answer is :-c) P.e. mp

5. When a small amount of Cu is added to a Ni conductor, then the –

   Your Answer is :-

   Freshersworld.com Answer is :-c) Resistivity of Ni will increase at all temperatures as Cu destroys the periodicity of Ni and acts as defects

6. A coil would behave as -

   Your Answer is :-

   Freshersworld.com Answer is :-c) A capacitor at very high frequencies

7. The law that induced emf and current always oppose the cause producing them was discovered by -

   Your Answer is :-

   Freshersworld.com Answer is :-c) Lenz

8. A 'trimmer' capacitor is a variable capacitor used for -

   Your Answer is :-

   Freshersworld.com Answer is :-a) 'Tunning up' a radio for best sensitivity

9. In panel wiring, solid wire is preferred to standard wire because it -

   Your Answer is :-

   Freshersworld.com Answer is :-b) Can be shaped better

10. FET's have similar properties to –

Your Answer is :-

Freshersworld.com Answer is :-c) Thermionic valves

11. The semiconductor strain gauge has gauge factor -

Your Answer is :-

Freshersworld.com Answer is :-c) 100

12. AE 139 is a-

Your Answer is :-

Freshersworld.com Answer is :-b) Germanium power transistor

13. When a zener diode is used in a power supply its function is to maintain a constant -

Your Answer is :-

Freshersworld.com Answer is :-a) Output voltage

14. The value of γ for a transistor in saturation is -

Your Answer is :-

Freshersworld.com Answer is :-a) 0

15. A DE MOSFET differs from a JFET in the sense that it has no –

Your Answer is :-

Freshersworld.com Answer is :-c) P-N junction

16. The gating pulse is removed after firing an SCR than the current in the SCR will –

Your Answer is :-

Freshersworld.com Answer is :-a) Remain the same

17. In the fabrication of an integrated circuit, the advantages of ion implantation over diffusion doping are that –

Your Answer is :-

Freshersworld.com Answer is :-a) Point imperfections are not produced

18. The alternate mode of a dual trace oscilloscope can be used for displaying –

Your Answer is :-

Freshersworld.com Answer is :-b) Two waveforms of relatively high frequency

19. Attenuator is a –

Your Answer is :-

Freshersworld.com Answer is :-c) pure resistance producing a constant attenuation at all frequencies

20. The equivalent circuit of the following circuit is –
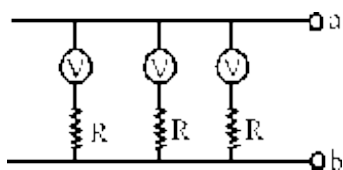
Your Answer is :-

Correct Answer is c
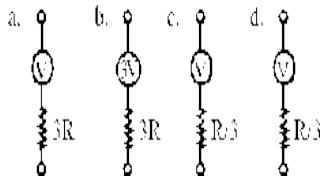
21. For the lattice type attenuator shown in the given figure, the characteristic impedance R is –
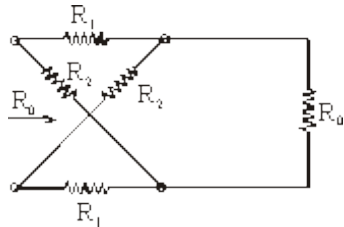
Your Answer is :-

$$c. \sqrt{R_1 R_2}$$

Correct Answer is :

22. Thevenin's equivalent circuit of the network shown in the given figure, between terminals T_1 and T_2 is –
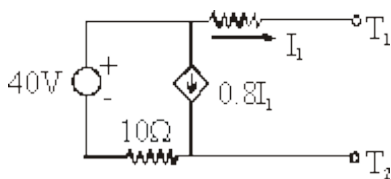
Your Answer is :-

b.
T_1 ——o— 40V —/\/\/\— 16Ω —— T_2

Freshersworld.com Answer is :-

23. One of the following combinations of open circuit voltage and Thevenins equivalent resistance which represents the Thevenins equivalent of the circuit shown in the given fig. is –
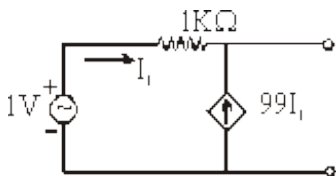
Your Answer is :-

Freshersworld.com Answer is :-a) 1V, 10Ω

24. In the following circuit, the effective resistance faced by the voltage source is –
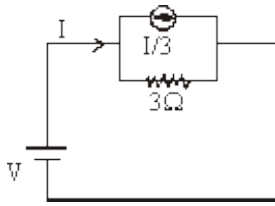
Your Answer is :-

Freshersworld.com Answer is :-c) 3Ω

25. The equivalent circuit of a resistor is shown in the given fig. The resistor will be non-inductive if –
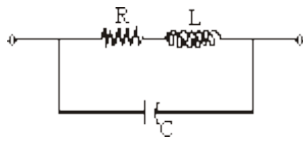
Your Answer is :-

$$b. \ R = \sqrt{\dfrac{L}{C}}$$

Freshersworld.com Answer is :-

26. One of the following which is a cut set of the graph shown in fig. is –
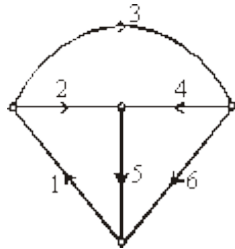
Your Answer is :-

Freshersworld.com Answer is :-d) 1, 3, 4 and 5

27. For which value of R the following circuit will deliver maximum to the terminals a and b is –
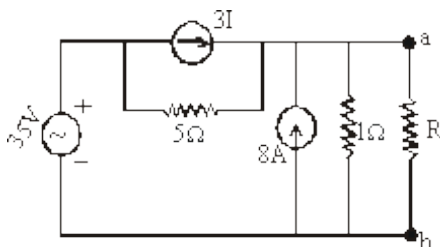
Your Answer is :-

$$a. \ \dfrac{5}{9} \Omega$$

Freshersworld.com Answer is :-

28. In a coaxial cable, braided copper is used as a -

Your Answer is :-

Freshersworld.com Answer is :-b) Shield

29. When the transmission loss for a 3 GHz microwave system over a certain distance is 130 dB and if the frequency is now doubled then the transmission loss will be –

Your Answer is :-

Freshersworld.com Answer is :-b) 133 dB

30. When two equal positive point charges are placed along X- axis at X1 and –X1 respectively then the electric field vector at a point P on the positive Y-axis will be directed -

Your Answer is :-

Freshersworld.com Answer is :-c) In the +y direction

31. With reference to the given figure, the signal picked up by the receiving antenna can be increased by increasing-

Your Answer is :-

Freshersworld.com Answer is :-c) both h_e and h_r

32. Which of the following antennas are frequency independent ?

1. Folded dipole

2. Half wave dipole

3. Parabolic reflector

4. Helical antenna

Your Answer is :-

Freshersworld.com Answer is :-c) 1,3 and 4

33. The reading of digital multimeter are –

Your Answer is :-

Freshersworld.com Answer is :-c) convenient

34. One of the following which does not have the same units as the others –

Your Answer is :-

Correct Answer is d

a. $\dfrac{L}{R}$

b. RC

c. $\sqrt{LC}$

d. $\dfrac{1}{\sqrt{LC}}$

35. Shaft encoder is used for the measurement of –

Your Answer is :-

Freshersworld.com Answer is :-a) angular position

36. The materials used in switches, brushes and relays for electrical contact must possess –

Your Answer is :-

Freshersworld.com Answer is :-a) high thermal conductivity and high melting point.

37. Capacitive transducer is superior to inductive type for the measurement of displacement because of –

Your Answer is :-

Freshersworld.com Answer is :-b) high frequency response

38. When a RLC series circuit has R=1ohm, L=1H and C = 1F then the damping ratio on the circuit will be-

Your Answer is :-

Freshersworld.com Answer is :-c) 0.5

39. The sensitivity of an electromagnetic digital flow meter can be increased by increasing –

Your Answer is :-

Freshersworld.com Answer is :-d) the number of teeth

40. A moving iron instrument –

Your Answer is :-

Freshersworld.com Answer is :-a) is an unpolarised meter

41. A linear displacement transducer of the digital type generally uses –

Your Answer is :-

Freshersworld.com Answer is :-c) Gray code

42. The output open circuit voltage divided by the input current for a two port reciprocal network is equal to-

Your Answer is :-

Freshersworld.com Answer is :-b) Z_{12}

43. The ac bridge shown in the given figure if balanced is Z_1 = 100 Đ30^0 Z_2 = 150Đ0^0, Z_3 = 250 Đ 40^0 and Z_4 is equal to –
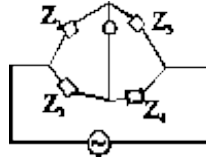
Your Answer is :-

Freshersworld.com Answer is :-b) 375Đ-70^0

44. The given figure represents the variation of electric field E –
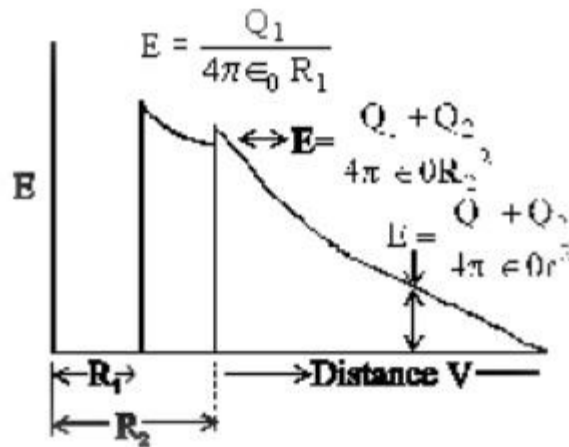
Your Answer is :-

Freshersworld.com Answer is :-b) Due to two concentric shells of charge Q_1 and Q_2 uniformly distributed over spheres of radii R_1 and R_2

45. In a SCR anode current flows over a narrow regain near the gate during-

Your Answer is :-

Freshersworld.com Answer is :-d) t_d and t_r

46. For a 3-phase six-pulse diode rectifier, the average output voltage in terms of maximum value of line voltage Vm is

Your Answer is :-

d. $\dfrac{3}{\pi} V m$

Freshersworld.com Answer is :-

47. In an inverter with fundamental ouctput frequency of 50 Hz, if third harmonic is eliminated, then frequencies of other components in the output voltage wave in Hz would be-

Your Answer is :-

Freshersworld.com Answer is :-c) 50, 250, 350, 550

48. Number of SCRs in a 3 phase full converter working during overlap is-

Your Answer is :-

Freshersworld.com Answer is :-b) 2 from positive group 1 from negative group

49. For a 3 phase bridge inverter in 180^0 conduction mode. In the given fig the sequence of SCR conduction in the first two steps beginning with the initiation of thyristor is-
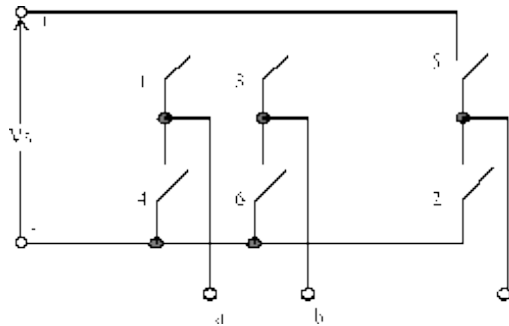
Your Answer is :-

Freshersworld.com Answer is :-d) 5,6,1 and 6,1,2

50. For the lattice type atten uator shown in the given figure, the characteristic impedance Rv is-
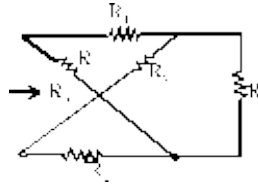
Your Answer is :-

c. $\sqrt{R_1R_2}$

Freshersworld.com Answer is :-

51. The plate efficiency of a class C amplifier is high because-

Your Answer is :-

Freshersworld.com Answer is :-c) The plate current flows only when grid is driven positive.

52. The low impedance of a dynamic loud speaker is a result of -

Your Answer is :-

Freshersworld.com Answer is :-b) the few turns of the voice coil

53. The value of I_{CBO} in a silicon transistor of β = 49 is 20 na) The value of I_{CEO} for a temperature rise of 18^0 C would be-

Your Answer is :-

Freshersworld.com Answer is :-a) 8mA

54. A certain percentage of negative feedback does not yield a fixed reduction in gain because it depends on-

Your Answer is :-

Freshersworld.com Answer is :-c) Initial value of gain

55. Crossover distortion occurs in --- amplifiers-

Your Answer is :-

Freshersworld.com Answer is :-a) Push pull

56. The power gain of an amplifier is 80 db) The half power frequency f_1 and f_2 are the frequency where gain has fallen to ---dB-

Your Answer is :-

Freshersworld.com Answer is :-b) 77

57. In the given fig the overall voltage gain in the amplifier is -
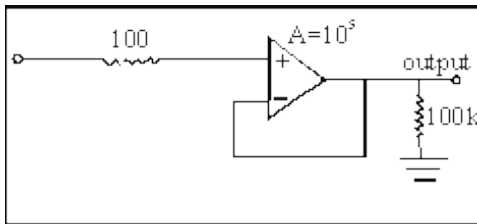
Your Answer is :-

Freshersworld.com Answer is :-b) 1

58. A two stage amplifier is required to have an upper cut off frequency of 2MHz and a lower cut off frequency 30Hz. The upper and lower cut off frequencies of individual stage are approximately-

Your Answer is :-

Freshersworld.com Answer is :-b) 3MHz, 20Hz

59. Number of possible states in a circuit with n- FLIPFLOPS is-

Your Answer is :-

Freshersworld.com Answer is :-d) 2^n

60. In a $3\frac{1}{2}$ digital voltmeter the largest number that can be read is –

Your Answer is :-

Freshersworld.com Answer is :-b) 1999

61. The complement of the Boolean expression $AB.\left(\overline{B}C + AC\right)$ is-

Your Answer is :-

a. $\left(\overline{A} + \overline{B}\right) + \left(B + \overline{C}\right)\left(\overline{A} + \overline{C}\right)$

Freshersworld.com Answer is :-

62. The binary division $11000_2 \div 100_2$ gives –

Your Answer is :-

Freshersworld.com Answer is :-a) 110

63. Time required by TTL circuit to switch from 0 to 1 or 1 to 0 is about –

Your Answer is :-

Freshersworld.com Answer is :-b) 10 ns

64. Identify the wrong statement ?

Your Answer is :-

Freshersworld.com Answer is :-d) 37.4_8 = 111 111.100

65. Type of radar used to eliminate clutter in navigational application is –

Your Answer is :-

Freshersworld.com Answer is :-c) Tracking radar

66. Asynchronous sequential circuits are seldom designed to operate in the pulse mode because –

Your Answer is :-

Freshersworld.com Answer is :-b) the duralion of the input pulses in a pulse mode is very critical

67. Identity the transferred electron device-

Your Answer is :-

Freshersworld.com Answer is :-c) Gunn diode

68. In a closed loop system the loop transfer function is given by

$$G(s)H(s) = \frac{K}{S^2\left(S^2 + 2S + 2\right)}$$

The angle of departure of the root locus at S = -1+ J is-

Your Answer is :-

Freshersworld.com Answer is :-d) -180^0

69. The transfer function of a plant is

$$G(S) = \frac{1}{(S^2 + 0.2S + 1)}$$

For a step input it is required that the response settles to within 2% of its final value. The plant setting time is –

Your Answer is :-

Freshersworld.com Answer is :-b) 40 sec

70. The transfer function and states in a linear feedback system shown in given fig. are respectively –
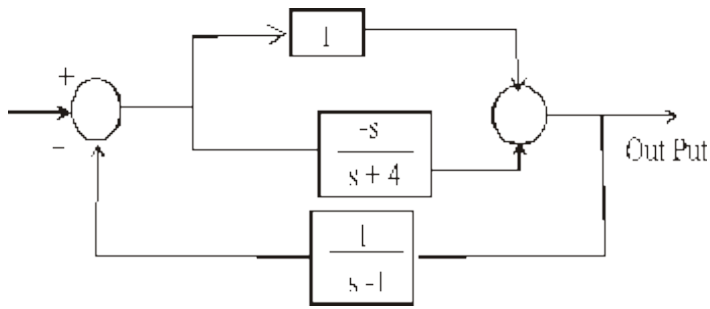
Your Answer is :-

Freshersworld.com Answer is :-a) strictly stable and not stable

71. What is the steady state-error corresponding to a unit step input if the magnitude plot for a transfer function is shown in figure
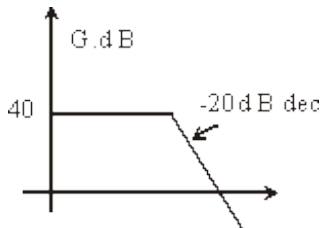
Your Answer is :-

$$c.\frac{1}{41}$$

Freshersworld.com Answer is :-

72. Mark the correct effect in respect of addition of a pole to the system loop transfer function?

1. The root locus is pulled to the right.

2. The system response becomes slower.

3. The steady state error increases.

of these statements-

Your Answer is :-

Freshersworld.com Answer is :-a) 1 and 2 are correct

73. In a feedback control system the polar plot of the open-loop transfer function intersects the real axis at - 2. The gain margin of the system is -

Your Answer is :-

Freshersworld.com Answer is :-a) −5 dB

74. The unity feedback system for K is

$$G(S)=\frac{K}{S(S+2)\,(S+4)}$$

the imaginary axis is-

Your Answer is :-

Freshersworld.com Answer is :-d) 48

75. The constant M loci plot is symmetrical width respect to-

Your Answer is :-

Freshersworld.com Answer is :-b) M =1 straight line and the real axis

76. Identify the wrong statement-

Your Answer is :-

Freshersworld.com Answer is :-b) At present4/6 GHz Geostationary satellites are being parked in Geosynchronous orbits at least 10^0 apart.

77. The Voltage Vo of the given circuit is-
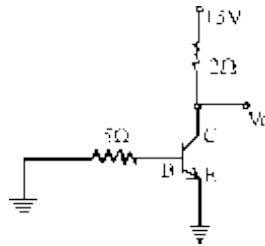
Your Answer is :-

Freshersworld.com Answer is :-a) 5V

78. An antenna has 40 antenna resistance and 60Ω radiation resistances. The efficiency of the antenna is -

Your Answer is :-

Freshersworld.com Answer is :-d) 60%

79. The blind speed of an MTl radar can be avoided by changing the-

Your Answer is :-

Freshersworld.com Answer is :-b) Pulse repetition frequency

80. Interlacing used in television is for-

Your Answer is :-

Freshersworld.com Answer is :-a) produce the illusion of motion.

81. The best system for accurate tracking if the target cross section is changing is-

Your Answer is :-

Freshersworld.com Answer is :-d) monopulse

82. In a single stage differential amplifier, the output effect voltage is basically dependent on the mismatch of-

Your Answer is :-

Freshersworld.com Answer is :-c) I_B and β

83. Antenna elevation angle at the ground station for satellite communication is always kept above 5^0 to-

Your Answer is :-

Freshersworld.com Answer is :-d) Increase the visibility of the satellite

84. In Hybrid wave-

Your Answer is :-

Freshersworld.com Answer is :-d) Neither electric nor magnetic fields are transverse to direction of propagation of the wave

85. Balometer technique is used to measure –

Your Answer is :-

Freshersworld.com Answer is :-b) Low power

86. In fast switching circuits we use –

Your Answer is :-

Freshersworld.com Answer is :-b) Tunnel diode

87. PIN diode is used as –

Your Answer is :-

Freshersworld.com Answer is :-d) Phase shifter

88. A periodic fluctuation of current passing through n type GaAS specimen when applied voltage exceeds critical value-

Your Answer is :-

Freshersworld.com Answer is :-c) GUNN effect

89. LOS distance can be increased by –

Your Answer is :-

Freshersworld.com Answer is :-c) Increasing height of bath

90. Which fading produces serious distortion of modulated signal-

Your Answer is :-

Freshersworld.com Answer is :-a) Selective

91. 8085 μ P is a processor of -

Your Answer is :-

Freshersworld.com Answer is :-a) 8 bit

92. The Bit position of AC flog in flog register is-

Your Answer is :-

Freshersworld.com Answer is :-b) D_4

93. In which arithmatic operation CY flog do not affect even if result is larger than 8 bit-

Your Answer is :-

Freshersworld.com Answer is :-a) INR B

94. A stock means-

Your Answer is :-

Freshersworld.com Answer is :-d) a set of memory location in memory reserved for storing information temporarily.

95. RIM instruction-

Your Answer is :-

Freshersworld.com Answer is :-a) checks pending interupts

96. A signal generated by microprocessor to provide timing of various operation is transmited through-

Your Answer is :-

Freshersworld.com Answer is :-c) control bus

97. On execution of RAL-

Your Answer is :-

Freshersworld.com Answer is :-d) Each bit is shifted to the adjacent left postion. Bit D_T becomes the carry bit and the carry bit is shifted into D_o

98. A frequency divider can be designed with help of-

Your Answer is :-

Freshersworld.com Answer is :-b) Bistable

99. The not allowed condition for NAND gate SR FF is-

Your Answer is :-

Freshersworld.com Answer is :-a) S = 0 R = 0

100. In IC resistors are formed from p-type semiconductor are –

Your Answer is :-

Freshersworld.com Answer is :-d) monolithic

101. Give the tense of the following sentence-

He walked to the garden.

Your Answer is :-

Freshersworld.com Answer is :-b) Past

102. You may go there if you want to. Here, the modal auxiliary 'may' indicates-

Your Answer is :-

Freshersworld.com Answer is :-c) possibility

103. What type of a sentence is this?

His findings were imroved and built apon.

Your Answer is :-

Freshersworld.com Answer is :-b) Comound

104. The manager is usually strict but in Madhav's case he decided to be-

Your Answer is :-

Freshersworld.com Answer is :-d) lenient

105.Find the word which is wrongly spelt-

Your Answer is :-

Freshersworld.com Answer is :-b) ocassion

106."Dow Jones" is -

Your Answer is :-

Freshersworld.com Answer is :-c) New York Stock Index

107.The term "Ashes" is associated with-

Your Answer is :-

Freshersworld.com Answer is :-b) Cricket

108."Kathakali" dance is connected with-

Your Answer is :-

Freshersworld.com Answer is :-a) Kerala

109.Among the following Miss India Universe 2001 is-

Your Answer is :-

Freshersworld.com Answer is :-c) Ms Celina Jetley

110. Maharashtra Bhusan Award for the year 2000 – 2001 by the state government goes to -

Your Answer is :-

Freshersworld.com Answer is :-c) Sachin Tendulkar

111.Who was Sworn in as the chief Justice of India-

Your Answer is :-

Freshersworld.com Answer is :-d) Mr. S.P. Bharucha

112. Which one of the following tennis competitions is not included in GRAND SLAM?

Your Answer is :-

Freshersworld.com Answer is :-c) French open

113.The first Korean to win the Japan open badminton tournament is -

Your Answer is :-

Freshersworld.com Answer is :-a) Lee Hyun – II

114.India launched first satellite by the name-

Your Answer is :-

Freshersworld.com Answer is :-b) Aryabhatt

115.Which state in India is called the "garden of spices"?

Your Answer is :-

Freshersworld.com Answer is :-b) Kerala

116. The new CEO and the president of the Infosys Technology is –

Your Answer is :-

Freshersworld.com Answer is :-b) Nandan Nilekani

117.The President of India can nominate to the Rajya Sabh-

Your Answer is :-

Freshersworld.com Answer is :-c) 12 members

118.King of Nepal is-

Your Answer is :-

Freshersworld.com Answer is :-a) Prince Gyanendra

119.The famous paper which gandhigi edited to propagate his ideas-

Your Answer is :-

Freshersworld.com Answer is :-b) Swadeshi

120.The length of the pitch in the cricket is-

Your Answer is :-

Freshersworld.com Answer is :-d) 22 yards

BSNL GE-JTO Recruitment Examination
Answers for Test Paper - IV

1. Reactive current through the capacitive load produces -

Your Answer is :-

Freshersworld.com Answer is :- b) Electric field

2. One of the following which gives piero-electric effect is -

Your Answer is :--

Freshersworld.com Answer is :- b) PVDF

3. PZT piezo- electric materials have -

Your Answer is :--

Freshersworld.com Answer is :-b) Lower curie temperature

4. The residual resistivity of a binary alloy at OK is -

Your Answer is :--

Freshersworld.com Answer is :-d) Dependent on the concentration of the minor component in the alloy

5. In active filter circuits, inductances are avoided mainly because they -

Your Answer is :--

Freshersworld.com Answer is :-b)Are bulky and unsuitable for miniaturisation

6. The depletion layer across a p-n junction lies -

   Your Answer is :--

   Freshersworld.com Answer is :-b) mostly in the n-region

7. The voltage induced in a loop of wire rotating in a strong and steady magnetic field is -

   Your Answer is :-

   Freshersworld.com Answer is :-d) ac

8. One of the following types of capacitor which is polarized is -

   Your Answer is :-

   Freshersworld.com Answer is :-a) Electrolytic

9. Electric shock is-

   Your Answer is :-

   Freshersworld.com Answer is :-c) Sometimes fatal

10. A typical value of filter capacitor for 50 Hz ripple is -

    Your Answer is :-

    Freshersworld.com Answer is :-a) 16mF

11. A telephone relay armature is made of material with -

    Your Answer is :-

    Freshersworld.com Answer is :-c) Negligible conductivity

12. Larger the value of filter capacitor -

    Your Answer is :-

    Freshersworld.com Answer is :-d) Smaller is the dc voltage across the load

13. Barrier potential in a P-N junction is caused by -

    Your Answer is :-

    Freshersworld.com Answer is :-b) Diffusion of majority carriers across the junction

14. The polarity of V_{GS} for E-only MOSFET is -

    Your Answer is :-

    Freshersworld.com Answer is :-d) depends on P or N channel

15. The following which will serve as a donor impurity in silicon -

    Your Answer is :-

    Freshersworld.com Answer is :-d) Antimony

16. When bias applied to a vari-cap diode is increased, its capacitance -

    Your Answer is :-

    Freshersworld.com Answer is :-a) is decreased

17. In case of a bipolar transistor a is -

Your Answer is :--
Freshersworld.com Answer is :-d) negative and less than 1

18. A BJT is -

Your Answer is :-

Freshersworld.com Answer is :-b) very sensitive to radiations.

19. An SCR may be considered to be -

Your Answer is :-

Freshersworld.com Answer is :-b) 3 diodes

20. For a BJT, under the saturation condition -

Your Answer is :-

Freshersworld.com Answer is :-d) $I_C < bI_B$

21. In modern MOSFET's the material used for the gate is -

Your Answer is :-

Freshersworld.com Answer is :-c) Heavily doped polycrystalline silicon

22. Find the Norton's equivalent of the circuit given below -
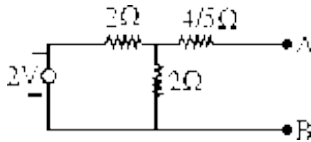
Your Answer is :-

$$d. \ \frac{2}{5}A, 2\Omega$$

Freshersworld.com Answer is :-

23. When the source in the circuit shown is a sinusoidal source then the input voltage is -
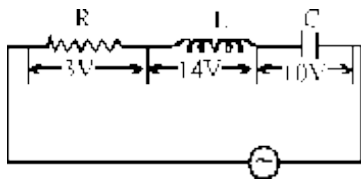
Your Answer is :-
Freshersworld.com Answer is :-b) 5V

24. The time constant of the network shown in the given figure is given by -
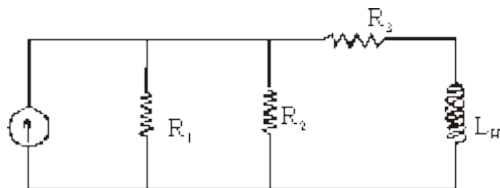
Your Answer is :-

a. $\dfrac{L}{R_3 + \dfrac{R_1 R_2}{R_1 + R_2}}$

Freshersworld.com Answer is :-

25. The voltage transfer ratio of two-port networks connected in cascade may be conveniently obtained from the -
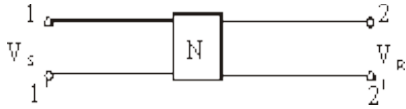
Your Answer is :-
Freshersworld.com Answer is :-a) product of the individual ABCD matrices of the two networks

26. When a network has response with time as shown in fig. then which one of the following diagrams represents the location of the poles of this network ?
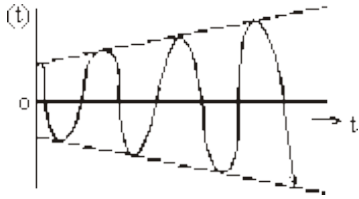
Your Answer is :-
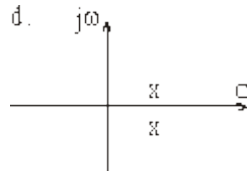
Freshersworld.com Answer is :-

27. For the network shown in the given fig. the ratio $\dfrac{V_{24}}{V_{13}}$ is -
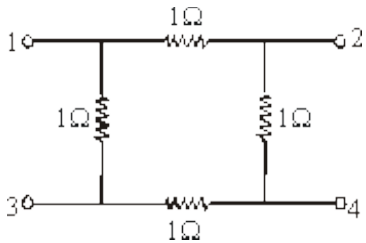
Your Answer is :-
Freshersworld.com Answer is :-

28. An attenuator drops a 10V signal to 50mv in an experiment. The loss in decibels is -

Your Answer is :-
Freshersworld.com Answer is :-b) –6dB

29. When the network has 10 nodes and 17 branches then the number of different node pair voltages would be -

Your Answer is :-
Freshersworld.com Answer is :-b) 9

30. The circuit shown in the following fig. will act as an ideal current source with respect to terminals A and B when frequency is -

Your Answer is :-
Freshersworld.com Answer is :-c) 4rad/s

31. When a short vertical grounded antenna is required to radiate at 1MHz and the effective height of the antenna is 30 m then the calculated value of the radiation resistance is -

Your Answer is :-
Freshersworld.com Answer is :-c) 15.8 W

32. Shannon's law relates -

Your Answer is :-
Freshersworld.com Answer is :-d) information carrying capacity to S/N ratio

33. One of the following modes which has the characteristic of attenceation becoming less as the frequency is increased and is attractive at microwave frequencies of circular cylindrical wave guides is -

Your Answer is :-
Freshersworld.com Answer is :-c) $TE_{01\ mode}$

34. For a transmission line, the propogation constant, for a TEM wave travelling in it is given by (Where the symbols have the usual meanings) -

Your Answer is :-
Freshersworld.com Answer is :-b) [R+jω L) (G+jω c)] ½

35. The advantages of wave guides over co-axial lines would include which of the following features-

1. Easier to use   2. lower power losses

3. Higher operating frequencies possible

Your Answer is :-

Freshersworld.com Answer is :-c) 2 and 3

36. When a 75 ohm transmission line is to be terminated in two resistive loads R1 and R2 such that the standing pattern in the two cases have the same SWR , then the values of R1 and R2 (in ohms) should be -

Your Answer is :-
Freshersworld.com Answer is :-b) 225 and 25 respectively

37. The degenerate modes in a wave guide are characterized by -

Your Answer is :-
Freshersworld.com Answer is :-a) Same cut off frequencies but different field distribution

38. A TEM wave impinges obliquely on a dielectric-dielectric boundary with $E_{r1}=2$ and $E_{r2}=1$, the angle of incidence for total reflection is -

Your Answer is :-
Freshersworld.com Answer is :-a) 30^0

39. The radiation pattern of Hertzian dipole in the plane perpendicular to the dipole is a -

Your Answer is :-
Freshersworld.com Answer is :-c) Figure of eight

40. Permeance is the -

Your Answer is :-
Freshersworld.com Answer is :-c) reciprocal of the reluctance

41. One of the following which is an active transducer is -

Your Answer is :-
Freshersworld.com Answer is :-d) Photo emission

42. The wein bridge uses only -

Your Answer is :-
Freshersworld.com Answer is :-d) Capacitors and Resistors.

43. The greater the value of Q -

Your Answer is :-
Freshersworld.com Answer is :-b) smaller will be the bandwidth of the resonant circuit.

44. The most serious source of error in a) c) bridge measurement is -

Your Answer is :-
Freshersworld.com Answer is :-d) stray fields.

45. Moving iron instruments -

Your Answer is :-
Freshersworld.com Answer is :-b) do not have a linear scale

46. If accuracy is the main consideration, which one of the following voltmeters should one select -

Your Answer is :-
Freshersworld.com Answer is :-d) 10,000 v ; 10 mA

47. In dc tacho generators used for measurement of speed of a shaft, frequent calibration has to be done because -

Your Answer is :-
Freshersworld.com Answer is :-c) the armature current produces heating effect

48. Ideal transformer cannot be described by -

Your Answer is :-
Freshersworld.com Answer is :-c) G parameters

49. Consider the following statements -

A3- phase balanced supply system is connected to a 3 phase unbalanced load) Power supplied to this load can be measured using

1. Two wattmeters

2. One wattmeter

3. Three wattmeters

Which of these statements is/are correct?

Your Answer is :-
Freshersworld.com Answer is :-b) 1 and 3

50. The function of the reference electrode in a pH meter is to -

Your Answer is :-
Freshersworld.com Answer is :-a) Produce a constant voltage

51. Match the column A (Devices) with column B (Characteristics) and select the correct answer by using the codes given below the column -

Column A   Column B

A) BJT   1. Voltage controlled negative resistance

B) MOSFET   2. High current gain

C) Tunnel diode   3. Voltage regulation

D) Zener diode   4. High input impedance

Codes :

                A   B   C   D

Your Answer is :-
    Freshersworld.com Answer is :-b)   2   4   1   3

52. A thyristor during forward blocking state is associated with.-

Your Answer is :-
Freshersworld.com Answer is :-b) low current , large voltage.

53. In controlled rectifiers, the nature of load current i.e. whether load current is continuous or discontinuous -

Your Answer is :-
Freshersworld.com Answer is :-b) depends both on the type of load and firing angle delay

54. A single phase voltage controller feeds power to a resistance of 10 W . The source voltage is 200 V rms. For a firing angle of 90^0 , the rms value of thyristor current in amperes is -

Your Answer is :-
Freshersworld.com Answer is :-c) 10

55. In the performance of single phase and three phase full converters the effect of source inductance is to

Your Answer is :-
Freshersworld.com Answer is :-c) reduce the output voltage

56. The cycloconverters (CCs) require natural or forced commutation as under -

Your Answer is :-
Freshersworld.com Answer is :-c) forced commutation in step up CCs

57. Power transistors are more commonly of -

Your Answer is :-
Freshersworld.com Answer is :-a) silicon npn type.

58. C is a -

Your Answer is :-
Freshersworld.com Answer is :-b) High level language

59. What will be output of program

main ( )

{ int i ;

print f ("Enter value of i");

scant ("%d", & i);

if (i = 5)

print f ("you entered 5");

else

print f ("you entered %d", i); }

if user entered 100 then

Your Answer is :-
Freshersworld.com Answer is :-a) 5

60. $(7F)_{16} + (BA)_{16} = (?)16$-

Your Answer is :-
Freshersworld.com Answer is :-b) 139

61. Two's complement of 3 bit nonzero linory number is some or original number is all bits accepts-

Your Answer is :-
Freshersworld.com Answer is :-a) MSB are zeros

62. The schematic circuits of RTL NOR gate is-

Your Answer is :-
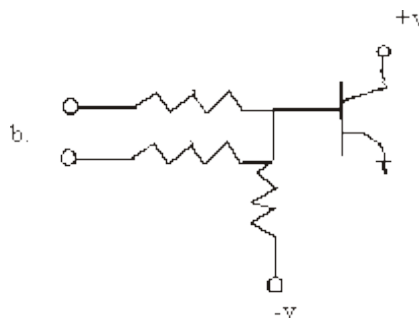
Freshersworld.com Answer is :-

63. . Transistors with high frequency have -

Your Answer is :-
Freshersworld.com Answer is :-a) Thick base

64. Telephone traffic is specified in terms of -

Your Answer is :-
Freshersworld.com Answer is :-d) Erlangs

65. In a Hartley oscillator -

Your Answer is :-
Freshersworld.com Answer is :-a) Necessary phase relation is obtained by connecting grid and plate electrodes to the opposite ends of the tuned circuit.

66. The condenser C is charged in a bootstrap sweep generator -

Your Answer is :-
Freshersworld.com Answer is :-a) Linearly but the discharge is non linear

67. In an audio amplifier audio signals become garbled and hence difficult to understand when an ac input current is large enough to drive the output to -

Your Answer is :-
Freshersworld.com Answer is :-c) Either saturation or cut off

68. Five 1 bit registers are referred as -

Your Answer is :-
Freshersworld.com Answer is :-a) Flags

69. Next binary number after 0,1, 10, 11 is -

Your Answer is :-
Freshersworld.com Answer is :-c) 100

70. Identify coincidence logic circuit in the following –

Your Answer is :-
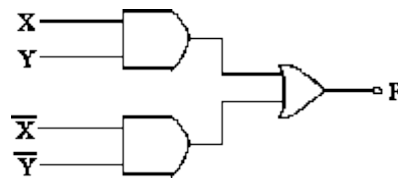
Freshersworld.com Answer is :-a)

71. The output analog voltage Vo is given by -

Your Answer is :-

$$b. -\left(\frac{R_F}{3R}\right)\left(\frac{V_R}{2^3}\right)\left[4b_2 + 2b_1 + 1b_0\right]$$

Freshersworld.com Answer is :-

72. . If an inverter is placed at the input to an SR flip flop, the result is -

Your Answer is :-
Freshersworld.com Answer is :-b) D flip flop

73. See the Root locus diagram of a system and the following statements :-
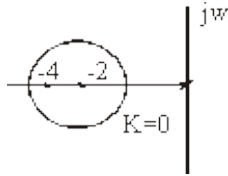
1. The open loop system is a second order system.

2. The system is over damped for $K > 1$

3. The system is absolutely stable for all value of R.

Which of these statements are correct?

Your Answer is :-
Freshersworld.com Answer is :-b) 1 and 3

74. For the transfer function $G(S)H(S) = \dfrac{1}{S(S+1)(S+0.5)}$ the phase cross over frequency is -

Your Answer is :-
Freshersworld.com Answer is :-b) 0.707 rad/sec

75. If the open loop transfer function of the system is $G(S)\ H(S) = \dfrac{K(S+10)}{S(S+8)(S+16)(S+72)}$

then a closed loop pole will be located at S = -12 wher the value of K is -

Your Answer is :-
Freshersworld.com Answer is :-b) 5760

76. Considering the following open loop transfer function -

1) $\dfrac{36}{S(S+3.6)}$ 2) $\dfrac{100}{S(S+5)}$ 3) $\dfrac{625}{S(S+4)}$

The correct sequence of these systems in increasing order of the time taken for the unit step response to settle is –

Your Answer is :-
Freshersworld.com Answer is :-c) 2, 3, 1

77. Considering unit feed back control system in the given figure, the ratio of time constant of closed loop response to open loop response will be -
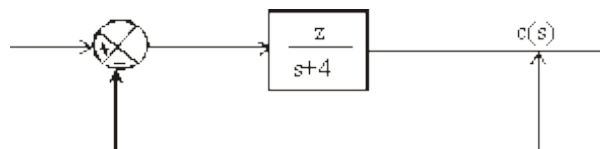
Your Answer is :-
Freshersworld.com Answer is :-d) 2 : 3

78. Angle subtended by earth at geostationary communication satellite is -

Your Answer is :-
Freshersworld.com Answer is :-a) 17.34^0

79. For data transmission phase modulation is commonly used because -

Your Answer is :-
Freshersworld.com Answer is :-b) It is resistant to the effects of noise.

80. Several channels are interleaved and then transmitted together is known as –

Your Answer is :-
Freshersworld.com Answer is :-a) Frequency division multiplex

81. Identify the wrong statement-

The radar cross section of a target -

Your Answer is :-
Freshersworld.com Answer is :-d) Is equal to the actual cross-sectional area for small targets.

82. Considering following parameters -

1. Loss in the media) 2. Permeability of the media) 3. Frequency of the wave 4. Velocity of the wave. Which of these parameters are responsible for the change of phase of a propagating electromagnetic wave?

Your Answer is :-
Freshersworld.com Answer is :-b) 2, 3 and 4

83. In super heterodyne receivers double spotting is caused by -

Your Answer is :-
Freshersworld.com Answer is :-a) poor front-end rejection

84. The number of lines per field in the United States TV system is -

Your Answer is :-
Freshersworld.com Answer is :-a) 262 $^{1/2}$

85. In a TV receiver the color killer -

Your Answer is :-
Freshersworld.com Answer is :-a) cuts off the chroma stages during monochrome receivers.

86. The nominal capacitance of a coaxial RF cable is of 40 pF/m and the characteristic impedance of 50Ω . The inductance of the cable is-

Your Answer is :-
Freshersworld.com Answer is :-c) 0.1 μ H/m

87. Transmission of wave through Dominant mode is -

Your Answer is :-
Freshersworld.com Answer is :-a) distortion less transmission

88. Lower the standing wave ratio (SWR) -

Your Answer is --
Freshersworld.com Answer is :-b) Lower mismatch error

89. In klyrtron oscillator for getting wide range of oscillations resonators should be -

Your Answer is :-
Freshersworld.com Answer is :-c) Over coupled

90. The critical frequency is always -

Your Answer is :--
Freshersworld.com Answer is :-a) Lower than maximum usable frequency

91. The PIN diode based on -

Your Answer is :-
Freshersworld.com Answer is :-c) Negative resistance

92. Which antenna having circular polarization -

Your Answer is :-
Freshersworld.com Answer is :-c) Helical antenna

93. The i/p S/N ratio of system is 50 and the o/p S/N ratio is 5 the noise figure is -

Your Answer is :-
Freshersworld.com Answer is :-c) 10

94. In the 8085 mP, the RST 6 instruction transfers the program execution to the following location -

Your Answer is :-
Freshersworld.com Answer is :-a) 30 H

95. In instruction cycle first operation is -

Your Answer is :-
Freshersworld.com Answer is :-c) Opcode fetch

96. CMP instruction comes under group -

Your Answer is --
Freshersworld.com Answer is :-d) Logical operations.

97. In which logic operation does not effect any flags -

Your Answer is :-
Freshersworld.com Answer is :-d) CMA

98. What happen when CALL instruction executed -

Your Answer is :-
Freshersworld.com Answer is :-c) 16 bit address of instruction saved on stock

99. The mark status of mark able interrupts is defined according to content of -

Your Answer is :-
Freshersworld.com Answer is :-d) Accumulator

100.The decoder is a logic ckt that -

Your Answer is :-
Freshersworld.com Answer is :-b) Identifies each combination of the signals present at i/p

101.The young man was quickly promoted when his employers how --------------- he was -

Your Answer is :-
Freshersworld.com Answer is :-c) assiduous

102. As letter is alphabet so zodiac is -

Your Answer is :-
Freshersworld.com Answer is :-c) sign

103. What is the correct meaning of prudish.?

Your Answer is :-
Freshersworld.com Answer is :-a) careful

104. Pick out the odd matching with reference to number -

Your Answer is :-
Freshersworld.com Answer is :-b) hair   – hairs

105. Choose the phrase that is most nearly similiar in meaning to the word given below-

Abut is

Your Answer is :-
Freshersworld.com Answer is :-d) Adjoin

106. The highest mountain peak in Indian Territory is -

Your Answer is :-
Freshersworld.com Answer is :-b) Kanchenjunga

107. German silver is an alloy comprising -

Your Answer is :-
Freshersworld.com Answer is :-a) Copper, Nickel and Zinc

108. Mughal Emperor Bahadur Shah Zafar's mausoleum is in -

Your Answer is :-
Freshersworld.com Answer is :-c) Yangon

109. On which date the World Trade Centre in New York and Pentagon in Washington d)C was attacked by terrorist -

Your Answer is :-
Freshersworld.com Answer is :-b) 11 September 2001

110. India defeats South Africa in the finals of the inaugural champions challenge Hockey Tournament in Kualalumpur by -

Your Answer is :-
Freshersworld.com Answer is :-d) 2-1

111. Which planets in the solar system are known as 'Inferior Planets' -

Your Answer is :-
Freshersworld.com Answer is :-d) Mercury and Venus.

112. The largest Stupa in Southern India is at -

Your Answer is :-
Freshersworld.com Answer is :-b) Amravati

113. The new chairman and Managing Director of Industrial Finance Corporaton of India (IFCI) is -

Your Answer is :-
Freshersworld.com Answer is :-a) Mr. Vishwanath Prasad Singh

114. Which one is the latest among rock-cut temples?

Your Answer is :-
Freshersworld.com Answer is :-c) Elephanta

115. Number of organisations government ban in Jammu and Kashmir and the North East under the new ordinance 'POTO' is -

Your Answer is :-
Freshersworld.com Answer is :-d) 23

116. In bed of which river does Badrinath shrine stand?

Your Answer is :-
Freshersworld.com Answer is :-c) Alakananda

117. The nerve endings for the sense of sight are located in the part of the eye called the -

Your Answer is :-
Freshersworld.com Answer is :-d) Retina

118. Fundamental duties were introduced in the constitution by the -

Your Answer is :-
Freshersworld.com Answer is :-b) 42nd Amendment

119. The Khalsa Panth was founded by -

Your Answer is :-
Freshersworld.com Answer is :-d) Guru Govind singh

120. Number of countries involved in international fleet review hosted by India is -

Your Answer is :-
Freshersworld.com Answer is :-c) 29

BSNL GE-JTO Recruitment Examination
Answers for Test Paper - V

1. Reactive current through the inductive load produces-

Your Answer is :-

Freshersworld.com Answer is :-a) Magnetic field

2. When a piece of copper and another of germanium are cooled from room temperature to 80 K then the resistance of -

Your Answer is :-

Freshersworld.com Answer is :-d) copper decreases and germanium increases

3. A capacitance transducer has two plates of area 5 cm^2 each separated by an air gap of 2mm. Displacement sensitivity in pF /cm due to gap change would be -

Your Answer is :-

Freshersworld.com Answer is :-a) 11.1

4.   The critical angle in degrees, for an electromagnetic wave passing from Quartz ($\mu = \mu_0$, $\in =4\in_0$) into air is-

Your Answer is :-

Freshersworld.com Answer is :-b)30

5.   When an RC driving point impedance function has zeros at s= -2 and s=-5 then the admissible poles for the function would be –

Your Answer is :-

Freshersworld.com Answer is :-b) s = -1; s = -3

6.   A capacitor used for power factor correction in single- phase circuit decreases –

Your Answer is :-

Freshersworld.com Answer is :-d) the line current and increases power factor

7.   The unit of inductance is –

Your Answer is :-

Freshersworld.com Answer is :-d) Henry

8.   Which type of by-pass capacitor works best at high frequencies –

Your Answer is :-

Freshersworld.com Answer is :-c) ceramic

9.   The usual value of the surge impedance of a telephone line is –

Your Answer is :-

Freshersworld.com Answer is :-c) 75 W

10.   Telemetering is a method of –

Your Answer is :-

Freshersworld.com Answer is :-c) transmitting information concerning a process over a distance

11.   In an unbiased P-N junction thickness of depletion layer is of the order of –

Your Answer is :-

Freshersworld.com Answer is :-b) 0.5 mm

12.   One of the semiconductor device, which behaves like two SCRs is–

Your Answer is :-

Freshersworld.com Answer is :-b) triac

13. The following, which is not an advantage of semiconductor strain gauges as compared to conventional strain gauges, is –

Your Answer is :-

Freshersworld.com Answer is :-b) least sensitive to temperature changes

14. The fundamental ripple frequency of a half wave 3F rectifier with a 3F supply of frequency 50 Hz is –

Your Answer is :-

Freshersworld.com Answer is :-a) 150 Hz

15. For an FR biased PNP transistor –

Your Answer is :-

Freshersworld.com Answer is :-a) base is negative with respect to emitter

16. With normal operation of a JFET one can get I_{DSS} –

Your Answer is :-

Freshersworld.com Answer is :-a) the maximum drain current

17. An SCR is a semiconductor device made up of –

Your Answer is :-

Freshersworld.com Answer is :-c) Two P type and two N type layers

18. For a UJT, if R_1 = resistance from emitter to base 1, R_2 = resistance from emitter to the base 2 and $R_{BB} = R_1 + R_2$ then the intrinsic stand off ratio (h) is –

Your Answer is :-

Freshersworld.com Answer is :-d)

19. As the drain voltage is increased for a junction FET in the pinch off region then the drain current –

Your Answer is :-

Freshersworld.com Answer is :-d) remains constant

20. When the energy gap of a semiconductor is 1.1eV then it would be –

Your Answer is :-

Freshersworld.com Answer is :-a) opaque to the visible light to the infrared radiation

21. The equivalent capacitance across ab will be –

Your Answer is :-

Freshersworld.com Answer is :-

22. In the following fig. the power dissipated is maximum when the value of R_x is –

Your Answer is :-
Freshersworld.com Answer is :-c) 10 K

23. The transfer function of a low pass RC network is –
Your Answer is :-

Freshersworld.com Answer is :-

24. The total capacitance across points 'a' and 'b' in the given figure is –

Your Answer is :-
Freshersworld.com Answer is :-b) 2.66 μ F

25. The load resistance needed to extract maximum power from the following circuit is –

Your Answer is :-

Freshersworld.com Answer is :-c) 6W

26.   Which one of the following conditions for z parameters would hold for a two port network containing linear bilateral passive circuit elements –

Your Answer is :-

Freshersworld.com Answer is :-c) $z_{11}z_{12} = z_{22}z_{21}$

27.   In the network shown, the switch is opened at t = 0. Prior to that, the network was in the steady state, Vs(t) at t = 0 is –

Your Answer is :-

Freshersworld.com Answer is :-b) 5V

28.   Which of the following statements are correct –
1. Tellegen's theorem is applicable to any lumped network
2. The reciprocity theorem is applicable to linear bilateral networks.
3. Thevenin's theorem is applicable to two terminal linear active networks.
4. Norton's theorem is applicable to two terminal linear active networks.
Your Answer is :-
Freshersworld.com Answer is :-b) 1, 2, 3 and 4

29.   Which one of the following transfer functions represents the critically damped system ?
Your Answer is :-
Freshersworld.com Answer is :-

30.   When the respective coil impedance of the circuit shown in the fig. is are $Z_1 = (5 + j8)\Omega$ and $Z_2=(3+j8)$ then the input impedance of the circuit will be –

Your Answer is :-

Freshersworld.com Answer is :-d) (8 + 0j)W

31.   One of the following statement which is not correct -

Your Answer is :-

Freshersworld.com Answer is :-d) None of the above

32.   Ultraviolet radiation emitted when electron jumps from an outer stationary orbit to -.

Your Answer is :-

Freshersworld.com Answer is :-a) first stationary orbit

33.   When the signal is propogated in a waveguide which has a full wave of electric intensity change between the two farther walls and no component of the electric field in the direction of propogation then the mode is –

Your Answer is :-

Freshersworld.com Answer is :-d) TE_{20}

34.   Consider the following statements pertaining to parabolic antenna -

1.It is commonly used above 1GHz

2. It get's circularly polarized

3. It's radiation pattern is highly directional

4. It's radiation pattern is cardiod

of these statements-

Your Answer is :-

Freshersworld.com Answer is :-c) 1,2 and 3 are correct

35.   When a vertical dipole antenna is used in conjunction with a loop antenna for direction finding, then the field pattern obtained will be-

Your Answer is :-

Freshersworld.com Answer is :-

36. When one end of a loss less transmission line of length $3/8\ \lambda$ and characteristic impedance R_0 is short circuited and the other end is terminated in Ro then the impedance at $\lambda\ /8$ away from the end terminated in R_0 is-

Your Answer is :-

Freshersworld.com Answer is :-b) R_0

37. For transmission of wave from a dielectric permittivity $\in_1$ into dielectric medium of lower permittivity $\in_2$ ($\in_1 > \in_2$) the critical angle of incidence Qc (relative to the interface) is given by -

Your Answer is :-

Freshersworld.com Answer is :-

38. A transmission line has primary constants R, L, G and C and secondary constants Z_0 and γ (= a + jb) if the line is loss less then .
Your Answer is :-

Freshersworld.com Answer is :-

39. The intrinsic impedance of a free space is-

Your Answer is :-

Freshersworld.com Answer is :-

40. One of the following which is a low gain but omni directional antenna is-

Your Answer is:-

Freshersworld.com Answer is :-d) helical

41. Electronic voltmeters have –

Your Answer is :-

Freshersworld.com Answer is :-b) low input impedance

42. The precision of an instrument indicates its ability to reproduce a certain reading with a given –

Your Answer is :-

Freshersworld.com Answer is :-d) consistency

43.   The precision of an instrument indicates its ability to reproduce a certain reading with a given –

Your Answer is :-

Freshersworld.com Answer is :-d) consistency

44.   In heterodyne digital conductor, the input signal is heterodyned to a –

Your Answer is :-

Freshersworld.com Answer is :-b) lower frequency

45.   In a digital measuring device, if the input electrical signal is in the frequency range dc to fmax Hz, then it must be sampled at a rate of –Your Answer is :-

Freshersworld.com Answer is :-d) 2 fmax times/sec .

46.   Moving Iron intruments measures the rms value of –

Your Answer is :-

Freshersworld.com Answer is :-b) an alternating quantity

47.   One of the following intruments which is used almost exclusively to measure radio frequency current is-

Your Answer is :-

Freshersworld.com Answer is :-d) Thermocouple meter.

48.   A good ohmic contact on a p- type semiconductor chip is formed by introducing –

Your Answer is :-

Freshersworld.com Answer is :-b) a high concentration of donors below the contract

49.   The use of thermocouple meters for ac measurement leads to a meterscale which is –

Your Answer is :-

Freshersworld.com Answer is :-b) square law

50.   If low pressure of the order of 10-6mm of Hg is to be measure then the instrument of choice would be-

Your Answer is :-

Freshersworld.com Answer is :-c) pirani gauge

51.

In the given circuit if the power dissipated in the 6W resister is zero then V is –

Your Answer is :-

Freshersworld.com Answer is :-a)

52. The equivalent circuit of a resistor is shown in the given figure. The resistor will be non inductive if –

Your Answer is :-a
Freshersworld.com Answer is :-b)

53. SCR turns OFF from conducting state to blocking state on –

Your Answer is :-

Freshersworld.com Answer is :- c) reducing anode current below holding current value

54. Static V-I characteristics of an SCR with different gate drives applied to the gate are indicated by-

Your Answer is :-

Freshersworld.com Answer is :-a) I92 > I 91 > I 90

55. Each diode of a 3 phase, 6-pulse bridge diode rectifier conducts for-

Your Answer is :-

Freshersworld.com Answer is :-b) 1200

56. A load, consisting of $R = 10\Omega$ and $\omega L = 10\Omega$ is being fed from 230 V, 50 Hz source through a 1 phase voltage controller. For a firing angle delay of 30^0, the rms value of load current would be-

Your Answer is :-

57. The total number of SCRs conducting simultaneously in a 3 phase full converter with overlap considered has the sequence of-

Your Answer is :-

58. A single phase voltage controller, using two SCRs in antiparallel is found to be operating as a controlled rectifier. This is because

Your Answer is :-

59. The inverse Fourier Transform of

Your Answer is :-

60. In a GTO anode current begins to fall when gate current-

Your Answer is :-

61 Power amplifiers and Audio use

Your Answer is :-

62. The amplifiers which are inserted at intervals amplify the signal and compensate for transmission less on the cable are called-

Your Answer is :-

63. A solid state device named TRIAC acts as a ----- switch

Your Answer is :-

64. Identify the fastest logic circuit when speed of operation is concerned-

Your Answer is :-

Freshersworld.com Answer is :-a) TTL

65. An amplifier CE is characterized by-

Your Answer is :-

Freshersworld.com Answer is :-d) Signal phase reversal

66. The standard symbol for EX-OR gate is –

Your Answer is :-

Freshersworld.com Answer is :-a)

67. Boolean algebra is based on –

Your Answer is :-

Freshersworld.com Answer is :-b) logic

68. Magnetic amplifiers are used for –

Your Answer is :-

Freshersworld.com Answer is :-b) power amplification

69. Number of resistors required for an N bit D/A converter in R-2R ladder D/A converter is-

Your Answer is :-

Freshersworld.com Answer is :-d) 2N

70. Not allowed' condition in NAND gate SR flip flop is –

Your Answer is :-

Freshersworld.com Answer is :-a) s = 0, R = 0

71. In a PID controlles the transfer function G(s) is

Your Answer is :-

Freshersworld.com Answer is :-

72. A time invariant linear stable system is forced with an input x(t) = A sin wt under steady state conditions, the output Y(t) of the system will be –

Your Answer is :-

Freshersworld.com Answer is :-d) | G (jw) A sin [wt + G (jw)] x(t)-------G(s)---------y(t)

73. Mark the wrong statement for two phase servo motor –

Your Answer is :-

Freshersworld.com Answer is :-b) The rotor resistance is low

74. The gain phase plot of open loop transfer function of four different systems labelled A, B, C, and D

are shown in the figure. The correct sequence of the increasing order of stability of the four systems will be-

Your Answer is :-

Freshersworld.com Answer is :-c) B, A, D, C,

75. A unity feedback system has G(S) =   . In the loot locus, the break

away point occurs between

Your Answer is :-

Freshersworld.com Answer is :-a) S = 0 and –1

76. Twice in a year a few minute disturbance occurs in space communication during sun-blinding when --- are in line

Your Answer is :-

Freshersworld.com Answer is :-d) Sun, satellite and earth station

77. The traffic handling capacity of an Earth station on the up link depends on-

-Your Answer is :-

Freshersworld.com Answer is :-d) All of the above

78. A supergroup pilot is –

Your Answer is :-

Freshersworld.com Answer is :-d) fed in at a GTE

79. If the antenna diameter in a radar system is increased by a factor of 4, the maximum range will be increased by a factor of

Your Answer is :-

Freshersworld.com Answer is :-c) 4

80. In the given circuit the capacitor C is almost shorted for the frequency range of interest of the input signal . Under this

 condition the voltage gain of the amplifier will be-

hfe = 100 hie = 1K –

Your Answer is :-

Freshersworld.com Answer is :-d) 1

81. Microwave frequency bond is-

Your Answer is :-

Freshersworld.com Answer is :-c) 300 MHz –10 GHz

82. Directional couplers are designed as-

Your Answer is :-

Freshersworld.com Answer is :-b) measuring instrument to measure power of signal through wave-guide

83. Gyrator has a -

Your Answer is :-

Freshersworld.com Answer is :-a) Phase difference of 1800 for transmission from port 1 to port 2 & no phase shift for transmission from port 2 to port 1

84. In klyrtron tube for getting oscillations-

Your Answer is :-

Freshersworld.com Answer is :-a) electron beam travels & RF field remains stationary

85. The most noisy among below is –

Your Answer is :-

Freshersworld.com Answer is :-a) IMPATT diode

86. The GUNN mode of gunn effect oscillator is also called as –

Your Answer is :-

Freshersworld.com Answer is :-c) Quenched domain mode

87. The total noise voltage across series ckt is –

Your Answer is :-

Freshersworld.com Answer is :-a)

88. The vertical height of F1 layer in ionospheric layer is –

Your Answer is :-

Freshersworld.com Answer is :-c) 110 km

89. 8085 mP contains instruction in instruction set-

Your Answer is :-

Freshersworld.com Answer is :-a) 64

90. If the clock freq. is 5 MHz how much time is required to execute on instruction 18 T-states-

Your Answer is :-

Freshersworld.com Answer is :-a) 3.6 m sec)

91. In 8085 mP a word is equal to-

Your Answer is :-

Freshersworld.com Answer is :-b) 16 bit

92. The instruction used to set continuous loops-

Your Answer is :-

Freshersworld.com Answer is :-d) JPE

93. What happen when RET instruction executed -

Your Answer is :-

Freshersworld.com Answer is :-c) 16 bit address of instruction saved on stock.

94.. DMA is a process-

Your Answer is :-

Freshersworld.com Answer is :-b) high speed data transfer under control of microprocessor

95. No. of boolean function can be generated from 3 variables-

Your Answer is :-

Freshersworld.com Answer is :-d) 256

96. The data storage in dynamic RAM is cell of-

Your Answer is :-

Freshersworld.com Answer is :-a) capacitance

97. What is 9's complement of 23-

Your Answer is :-

Freshersworld.com Answer is :-c) 78

98. An array is collection of -

Your Answer is :-

Freshersworld.com Answer is :-d) different data type placed next to each other in memory

99. While reading from the memory location for active high i/p pins-

Your Answer is :-

Freshersworld.com Answer is :-b) Read at 0 and chip select at logical 1 level

100. When all i/p bits of AND gate are zero then o/p will be-

Your Answer is :-

Freshersworld.com Answer is :-b) 1

101. The fan out comparison between TTL logic and DRL logic is

Your Answer is :-

Freshersworld.com Answer is :-d) Both logic having lower fan out

102. I was asked to perform the task of numbering points we had scored –

Your Answer is :-

Freshersworld.com Answer is :-c) tallow

103. The taste is rancid as the rank is –

Your Answer is :-

Freshersworld.com Answer is :-b) look

104. Troupe is a group of performers in a –

Your Answer is :-

Freshersworld.com Answer is :-c) cinema

105. Complete the sentence with correct alternative

He is --- well today-

Your Answer is :-

Freshersworld.com Answer is :-c) not

106. Fritter is –

Your Answer is :-

Freshersworld.com Answer is :-d) cancel

107. The sun rays falls vertically on-

Your Answer is :-

Freshersworld.com Answer is :-b) Doldrums

108. In India 'Lotus' award is given in the field of-

Your Answer is :-

Freshersworld.com Answer is :-b) Films

109. The Chauri-Chaura incident is related to

Your Answer is :-

Freshersworld.com Answer is :-a) A major offensive by underground revolutionaries

110. Dadamuni Ashok Kumar deceased on-

Your Answer is :-

Freshersworld.com Answer is :-b) 20 December 2001

111. The first batsman in Test history to aggregate 350 plus runs in a Test Match is-

Your Answer is :-

Freshersworld.com Answer is :-c) Sachin Tendulkar

112. Antibiotics which are effective against more than one type of bacteria are known as-

Your Answer is :-

Freshersworld.com Answer is :-d) Anti metabodies

113.The books Sushrut Sanhita and Charak S anhita are related to-

Your Answer is :-

Freshersworld.com Answer is :-b) Interpretation of Puranas

114. An enzyme is a protein that -

Your Answer is :-

Freshersworld.com Answer is :-a) Is used by the body as a food

115.Atal Behari Vajpayee was Prime Minister for 13 days in-

Your Answer is :-

Freshersworld.com Answer is :-a) May 1996

116. RBI lowers the deposit rates ceiling for non banking finance companies from 14 percent to – percent per annum-

Your Answer is :-

Freshersworld.com Answer is :-c) 10.5

117. Booker prize is won in the field of -

Your Answer is :-

Freshersworld.com Answer is :-a) Science

118. Leprosy is caused by-

Your Answer is :-

Freshersworld.com Answer is :-a) Bacterium

119.Zojila is a pass between-

Your Answer is :-

Freshersworld.com Answer is :-a) Kashmir valley and Ladakh

120. Deforestation results in-

1. Flora destruction

2. Fauna destruction

3. Ecological misbalance

Your Answer is :-

Freshersworld.com Answer is :-a) 1, 2 and 3

BSNL GE-JTO Recruitment Examination
Test Paper - II

1. If the voltage applied across a capacitance is triangular in waveform then the waveform of the current is-

   Your Answer is :-Trapezoidal

   Freshersworld.com Answer is :- Rectangular

2. One of the following statement which is true for relative dielectric constant is -

   Your Answer is :-It is not equal to unity for vacuum

   Freshersworld.com Answer is :- It is dimensionless

3. Pure metals generally have-

   Your Answer is :-

   Freshersworld.com Answer is :- high conductivity and large temperature coefficient

4. For small size, high frequency coils, the most common core material is

   Your Answer is :-

   Freshersworld.com Answer is :- Air

5. For an abrupt junction Varactor diode, the dependence of device capacitance (C) on applied reverse bias (V) is given by-

   Your Answer is :-
   Freshersworld.com Answer is :- C a $V^{-1/3}$

6. A superconductor is a-

   Your Answer is :-

   Freshersworld.com Answer is :-A material showing perfect conductivity and Meissner effect below a critical temperature

7. When a semiconductor based temperature transducer has a temperature coefficient of – 2500 mV/^{0}C then this transducer is indeed a-

   Your Answer is :-

   Freshersworld.com Answer is :- Forward biased pn junction diode

8. The location of lightning arrestor is -

   Your Answer is :-
   Freshersworld.com Answer is :- Near the transformer

9. Time constant of an RC circuit increases if the value of the resistance is -

   Your Answer is :-
   Freshersworld.com Answer is :- Increased

10. Intrinsic semiconductors are those which -

    Your Answer is :-
    Freshersworld.com Answer is :- Are made of the semiconductor material in its purest from

11. The primary control on drain current in a JFET is exerted by -

    Your Answer is :-
    Freshersworld.com Answer is :- Gate reverse bias

12. The electrical conductivity of metals which is expressed in ohm^{-1} m^{-1} is of the order of -

Your Answer is :-
Freshersworld.com Answer is :- 10^5

13. When biased correctly, a zener diode –

Your Answer is :-
Freshersworld.com Answer is :- has a constant voltage across it

14. The current amplification factor a_{dc} is given by –

Your Answer is :-
Freshersworld.com Answer is :- I_C/I_E

15. Compared to bipolars, FETs have-

Your Answer is :-
Freshersworld.com Answer is :- high input impedance

16. The source-drain channel of JFET is -

Your Answer is :-
Freshersworld.com Answer is :- both a and b

17. A diac is equivalent to a -

Your Answer is :-
Freshersworld.com Answer is :- Pair of four layer SCRs

18. When a sample of N type semiconductor has electron density of 6.25 ´ 10^{11} /cm^3 at 300K and if the intrinsic concentration of carriers in this sample is 2.5 ´ 10^{13}/cm^3 then the hole density will be –

Your Answer is :-
Freshersworld.com Answer is :- 10^3/ cm^3

19. When the two networks shown in fig. are equivalent with respect to the terminals 1 and 2 at all frequencies then the values of C_A, L_B, L_C and C_C will be –
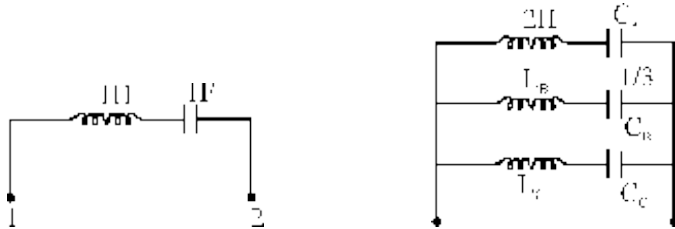
Your Answer is :-
Freshersworld.com Answer is :- 0.5, 3, 6, 0.166

20. The transmission parameter of the network C when the transmission parameter of the network A and B are $\begin{bmatrix} 1 & R \\ 0 & 1 \end{bmatrix}$ and $\begin{bmatrix} 1 & 0 \\ 1/R & 1 \end{bmatrix}$ respectively are -

Network A   Network B   Network C
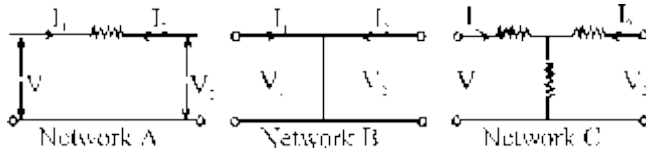
Your Answer is :-

$$b. \begin{bmatrix} 2 & 3R \\ \frac{1}{R} & 2 \end{bmatrix}$$

Freshersworld.com Answer is :-

21. The statement 'In any network of linear impedances, the current flowing at any point is equal to the algebraic sum of the currents caused to flow at that point by each of the sources of emf taken separately with all other emf's reduced to zero' represents -

Your Answer is :-
Freshersworld.com Answer is :- Superposition theorem

22. One of the following modes which has the characteristics of attenuation becoming less as the frequency is increased and is attractive at icrowave frequencies of circular cylindrical wave guides is –

Your Answer is :-
Freshersworld.com Answer is :- TE_{01} mode

23. A two-port network is symmetrical if –

Your Answer is :-
Freshersworld.com Answer is :-AD – BC = 1

24. For transmission line load matching over a range of frequencies, it is best to use a-

Your Answer is :-
Freshersworld.com Answer is :- double stub

25. The poles and zeros of a driving point function of a network are simple and interlace on the negative real axis with a pole closest to the origin. It can be realised -

Your Answer is :-
Freshersworld.com Answer is :- only by an RLC network

26. Poles and zeros of a driving point function of a network are simple and interlace on the jω axis. The network consists of elements –

Your Answer is :-
Freshersworld.com Answer is :- L and C

27. For a two port reciprocal network, the output open circuit voltage divided by the input current is equal to –

Your Answer is :-
Freshersworld.com Answer is :- Z_{12}

28. In a short electric doublet the radiation properties are so that-

Your Answer is :-
Freshersworld.com Answer is :-Mean rate of power through a unit area of spherical sphere surrounding this doublet is proportional to the square of the elemental length, other factors remaining constant.

29. The frequency modulated (FM) radio frequency range is nearly -

Your Answer is :-
Freshersworld.com Answer is :-90 – 105 MHz

30. In an underground cable the distortion in the transmission of carrier frequency can be eliminated by using -

Your Answer is :-
Freshersworld.com Answer is :- Inductive loading

31. The characteristic impendence of a transmission line with inductance 0.294 μ H /m and capacitance 60 pF/m is -

Your Answer is :-
Freshersworld.com Answer is :- 70 W

32. One of the following statements which is not true for a strip line compared to a waveguide is –

Your Answer is :-
Freshersworld.com Answer is :- It has a smaller bandwidth

33. For a quarter wavelength ideal transmission line of characteristic impedance 50 ohms and load impedance 100 ohms, the input impedance will be –

Your Answer is :-
Freshersworld.com Answer is :- 25Ω

34. The depth of penetration or skin depth for an electromagnetic field of frequency 'f' in a conductor of resistivity ρ and permeability m is-

Your Answer is :-
Freshersworld.com Answer is :- directly proportional to ρ and inversely proportional to f and m

35. When an antenna has a gain of 44dB then assuming that the main beam of the antenna is circular in cross-section the beam width will be -

Your Answer is :-
Freshersworld.com Answer is :- 2.4456^0

36. Lens antennas used for microwaves are usually made of -

Your Answer is :-
Freshersworld.com Answer is :- Polystyrene

37. One of the following types of instrument which is an electrometer is -

Your Answer is :-
Freshersworld.com Answer is :- Electrostatic

38. When an ac current of 5A and dc current of 5A flow simultaneously through a circuit then which of the following statement is true ?

Your Answer is :-
Freshersworld.com Answer is :- An ac ammeter will read less than 10A but more than 5A

39. When Q factor of a circuit is high, then -

Your Answer is :-
Freshersworld.com Answer is :- none of these

40. The resolution of a logic analyser is -

Your Answer is :-
Freshersworld.com Answer is :- the minimum amplitude of input signal it can display

41. The aperture time of an A to D converter is given by -

Your Answer is :-

$$c. \frac{\Delta E}{2\pi f . E_m}$$

Freshersworld.com Answer is :-

42. A memory less system is –

Your Answer is :-
Freshersworld.com Answer is :- causal

43. An air capacitor is a –

Your Answer is :-
Freshersworld.com Answer is :-time invariant and passive device

44. Thermistors are made of -

Your Answer is :-
Freshersworld.com Answer is :- sintered mixtures of metallic oxides

45. Pirani gauge is used to measure –

Your Answer is :-
Freshersworld.com Answer is :- very low pressures

46. These circuits converts input power at one frequency to output power at a different frequency through one stage conversion –

Your Answer is :-
Freshersworld.com Answer is :-Cyclo converters

47. In a forward voltage Triggering thyristor changes from –

Your Answer is :-
Freshersworld.com Answer is :- off state to on state

48. Q factor of a coil in Maxwell bridge is obtained as –

Your Answer is :-

b. ωCR

Freshersworld.com Answer is :-

49. A thyristor, when triggered, will change from forward blocking state to conduction state if its anode to cathode voltage is equal to -

Your Answer is :-
Freshersworld.com Answer is :- peak working off state forward voltage

50. Gate characteristic of a thyristor-

Your Answer is :-
Freshersworld.com Answer is :-has a spread between two curves of $V_g – I_g$

51. A four quadrant operation requires-

Your Answer is :-
Freshersworld.com Answer is :-two full converters connected back to back

52.. If for a single phase half bridge inverter, the amplitude of output voltage is V_s and the output power is P, then their corresponding values for a single phase full bridge inverter are –

Your Answer is :-
Freshersworld.com Answer is :- $2V_s$, 2P

53.For critical damping of the resonant circuit consisting of R_d, L, C in series is –

Your Answer is :-

$$c. \sqrt{\frac{1}{LC} - \left(\frac{R_d}{2L}\right)^2} = 0$$

Freshersworld.com Answer is :-

54. In an enhancement type MOSFET the output V-I characteristics has –

Your Answer is :-
Freshersworld.com Answer is :- only ohmic region at 10 W voltage value followed by a saturation region at higher voltages

55. The energy gap in a semiconductor -

Your Answer is :-
Freshersworld.com Answer is :-decrease with temperature

56. In an electronic circuit matching means -

Your Answer is :-
Freshersworld.com Answer is :-transferring maximum amount of signal between different kinds of circuits.

57. P channel FETs are less superior than N channel FETs because

Your Answer is :-
Freshersworld.com Answer is :- Mobility of electrons is greater than that of holes

58. Small increase in temperature in the CE connected transistor is the -

Your Answer is :-
Freshersworld.com Answer is :- Increase in I_{CEO}

59. An amplifier has a band width of 20 KHz and a midband gain of 50 without feedback. If a negative feedback of 1% is applied then bandwidth with feedback is -

Your Answer is :-
Freshersworld.com Answer is :- 30KHz

60. The output of a class B amplifier -

Your Answer is :-
Freshersworld.com Answer is :- consists of positive half cycles only

61. An amplifier with negative feedback

Your Answer is :-
Freshersworld.com Answer is :- all of the above

62. What changes would be necessary in block C if FM signals are to be received -

Your Answer is :-
Freshersworld.com Answer is :- A FM detector would be required

63. The main disadvantage of Diode-Transistor logic (DTL) is its-

Your Answer is :-
Freshersworld.com Answer is :- slower speed

64. Time delay Δ t in digital signals in an SIS O shift register is given by –

Your Answer is :-
Freshersworld.com Answer is :- Δ t = N ´ 1/Fc

65. The output Qn is 1 in a JK flip flop and it does not change when clock pulse is applied)
The possible combination of Jn and Kn can be –

(y denotes don't care)

Your Answer is :-
Freshersworld.com Answer is :- y and 0

66. Basic memory cell of dynamic RAM consists of –

Your Answer is :-
Freshersworld.com Answer is :- a transistor acting as a capacitor

67. The 2's complement of 1000_2 is –

Your Answer is :-
Freshersworld.com Answer is :- 1000

68. Master slave flip-flop is made up of –

Your Answer is :-
Freshersworld.com Answer is :- two flip flops connected in series

69. Number of nybbles making one byte is –

Your Answer is :-
Freshersworld.com Answer is :- 2

70. The intrinsic impedance of free space-

Your Answer is :-
Freshersworld.com Answer is :- is independent of frequency

71. A system consists of 12 poles and 2 zeroes. Its high frequency asymptote in its magnitude plot has a slope of -

Your Answer is :-
Freshersworld.com Answer is :- –200 dB/decade

$$G(S) = \frac{1}{(S+2)^1}$$

72. In a unity feed back control system the open loop transfer function is

The closed loop transfer unit will have pole at –

Your Answer is :-
Freshersworld.com Answer is :- –2, +j1,-j1

73. In a compensating network the transfer function is of the form $\dfrac{1+\alpha Ts}{(1+Ts)}$ If this is a phase log network the value of α should be –

Your Answer is :-
Freshersworld.com Answer is :- between 0 and 1

74. Considering the conditions-

1. High loop gain   2. Less ringing

3. Greater damping   4 Negative dB gain margin

System stability requirements would include

Your Answer is :-
Freshersworld.com Answer is :-2, 3 and 4

75. A typical control system is shown.

Assuming $R(s) = \dfrac{1}{5},$ the steady state errors is given by
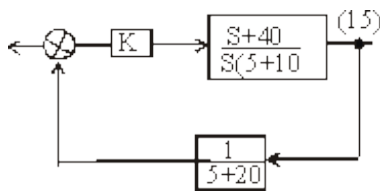
Your Answer is :-

C. ZERO

Freshersworld.com Answer is :-

76. The centre and radius of M of circles are given respectively by

Your Answer is :-

$$a. \quad \frac{M}{M^2-1} \left(\frac{-M^2}{M^2-1}, 0 \right)$$

Freshersworld.com Answer is :-

77. The open –loop transfer function for a unity feedback system is –

$$G(s) = \frac{16(s+2)}{s^2(s+1)(s+4)}$$

what is the steady state error if the input is,

r(t) = (2 + 3t + 4t²) u(t)

Your Answer is :-
Freshersworld.com Answer is :- 1

78. The sensitivity S_G^M of a system with the transfer function $M = \dfrac{G}{1+GH}$ is given by

Your Answer is :-
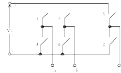
Freshersworld.com Answer is :-

79. In the equatorial plane only Geosychronous satellite are launched because it is the only plane which provides –

Your Answer is :-
Freshersworld.com Answer is :- stationary satellite

80. Radio Broadcasting is an example of –

Your Answer is :-
Freshersworld.com Answer is :- frequency multiplexing

81. PAM signals can be demodulation by using a –

Your Answer is :-
Freshersworld.com Answer is :- A clipper circuit by a LPF

82. In an FDM receiver channels can be separated by using –

Your Answer is :-
Freshersworld.com Answer is :- AND gates

83. The most common modulation system used for telegraphy is-

Your Answer is :-
Freshersworld.com Answer is :- frequency shift keying

84. Use of varoctor diode in generation of modulated segial be-

Your Answer is :-
Freshersworld.com Answer is :- FM generation only

85. In colour picture tube shadow mask is used to-

Your Answer is :-
Freshersworld.com Answer is :- increase screen brightness

86. The circuit that separates composite video warefore from the sync pulses is-

Your Answer is :-
Freshersworld.com Answer is :- a sawtooth current

87. Band width of microwaves is-

Your Answer is :-
Freshersworld.com Answer is :- 1GHz -10^3 GHz

88. In transverse Magnetic mode-

Your Answer is :-
Freshersworld.com Answer is :- no magnetic line is in direction of propagation

89. Signal transmission in sky wave propagation is due to –

Your Answer is :-
Freshersworld.com Answer is :- Reforction of wave

90. According to Barkhausen Criterion Phase shift of signal should be –

Your Answer is :-
Freshersworld.com Answer is :- 360^0

91. . The transmission does not have -

Your Answer is :-
Freshersworld.com Answer is :- Partition noise

92. Varoctor diode has non linearity of -

Your Answer is :-
Freshersworld.com Answer is :- capacitance

93. Scattering matrix equation for directional coupler is –

Your Answer is :-

$$\begin{bmatrix} o & p & o & jq \\ p & o & jq & o \\ o & jq & o & p \\ jq & o & p & o \end{bmatrix}$$

Freshersworld.com Answer is :-

94. Noise figure is calculated as –

Your Answer is :-
Freshersworld.com Answer is :- i/p S/N Ratio / O/P S/N Ratio

95. You can determine quickly the effect of adding poles and zeros by –

Your Answer is :-
Freshersworld.com Answer is :- Bode plot

96. The polar plot of G(S) = $\dfrac{10}{S(S+1)^2}$ intercepts real axis at $\omega = \omega_o$. Then, the real part and ω_o are given by-

Your Answer is :-
Freshersworld.com Answer is :- −5, 1

97. Laplace transform F (s) of a function f (E) is given by

$$F(s) = \frac{10s(s+7)}{(s+1)(s+8)(s+10)}$$

The initial and final values of F (t) will be respectively-

Your Answer is :-
Freshersworld.com Answer is :-10 and zero

98. A satellite link uses different frequencies for receiving and transmitting in order to –

Your Answer is :-
Freshersworld.com Answer is :- avoid interference between its powerful transmitted signals and weak in coming signal

99. The first determining factor in selecting a satellite system is its-

Your Answer is :-
Freshersworld.com Answer is :- Coverage area

100.Equalizing pulses in TV are sent during-

Your Answer is :-
Freshersworld.com Answer is :-vertical blanking

101. The son seems to have -------- from his father a somewhat gloomy and moody manner-

Your Answer is :-
Freshersworld.com Answer is :-inherited

102. Essayist works with words as sculptor with-

Your Answer is :-
Freshersworld.com Answer is :- stone

103.What is a collection of sheep called ?

Your Answer is :-
Freshersworld.com Answer is :- flock

104.Join these sentences meaningfully by choosing the correct alternative from the following :

You can buy a book.   You can read it.

Your Answer is :-
Freshersworld.com Answer is :- and

105.What is the opposite of Asperity –

Your Answer is :-
Freshersworld.com Answer is :- superiority

106.The Election Commission functions under-

Your Answer is :-
Freshersworld.com Answer is :-None of these

107.Article 352 of Indian Constitution needs to be revoked in case-

Your Answer is :-
Freshersworld.com Answer is :- Emergency is declared

108.Radio-activity was first discovered by-

Your Answer is :-
Freshersworld.com Answer is :- Becquerel

109.Ninth Plan in India ranges from-

Your Answer is :-
Freshersworld.com Answer is :- 1997-2002

110.How much electricity does India propose to generate through nuclear power by the year 2000 AD?

Your Answer is :-
Freshersworld.com Answer is :- 10,000 MW

111.In which year did the fall of Bastille take place?

Your Answer is :-
Freshersworld.com Answer is :- 1789

112. To form a quorum how many members of the Lok Sabha or Rajya Sabha should be present?

Your Answer is :-
Freshersworld.com Answer is :- 1/10th of total membership

113. How may countries are non-permanent members of the Security Council?

Your Answer is :-
Freshersworld.com Answer is :- 10

114. The International Date Line is represented by-

Your Answer is :-
Freshersworld.com Answer is :- 180^0 meridian

115. India's first satellite was launched from-

Your Answer is :-
Freshersworld.com Answer is :- A Soviet cosmodrome

116. Name the author of the famous book "Politics"-

Your Answer is :-
Freshersworld.com Answer is :- Aristotle

117. "Guernica" is Picasso's painting on-

Your Answer is :-
Freshersworld.com Answer is :- The Spanish Civil War

118. The object of the Supreme Court's Keshvanand Bharati ruling is -

Your Answer is :-

Freshersworld.com Answer is :- To put a limit on Parliament's amendatory powers

119. Which country in July '99 officially announced mastering of indigenously developed neutron bomb technology?

Your Answer is :-
Freshersworld.com Answer is :- China

120. Shifting cultivation is commonly used in which of the following states?

Your Answer is :-
Freshersworld.com Answer is :-Nagaland

BSNL GE-JTO Recruitment Examination

Test Paper - I

Chapter –1

1. For a parallel plate capacitor which is being charged out of the following the incorrect statement is –

Your Answer is :

Freshersworld.com Answer is :- The pointing vector points everywhere radially outward of the volume between plates.

2. The presence of alkali oxides in alumino silicate ceramics is likely to result in dielectric breakdown due to –

   Your Answer is :-

   Freshersworld.com Answer is :-Conductivity

3. Which of the following will serve as a donor impurity in silicon –

   Your Answer is :-

   Freshersworld.com Answer is :-Antimony

4. Electrical contact materials used in switches, brushes and relays must possess –

   Your Answer is :-

   Freshersworld.com Answer is :-High thermal conductivity and high melting point

5. The Maximum spectral response of the germanium and silicon is in the –

   Your Answer is :-

   Freshersworld.com Answer is :- ultraviolet region

6. For an insulating material, dielectric strength and dielectric loss should be respectively –

   Your Answer is :-

   Freshersworld.com Answer is :-high and low

7. In a distortion factor meter, the filter at the front end is used to suppress –

   Your Answer is :-

   Freshersworld.com Answer is :-fundamental component

8. The coefficient of coupling between two air core coils depends on –

   Your Answer is :-

   Freshersworld.com Answer is :-mutual inductance and self inductances of the two coils

9. Modern capacitors which have high capacitance in small size use a dielectric of –

   Your Answer is :-

   Freshersworld.com Answer is :-ceramic

Chapter – 2.

10. In any atom the potential energy of an orbiting electron is –

    Your Answer is :-

    Freshersworld.com Answer is :- always negative

11. A DE MOSFET differs from a JFET in the sense that it has no –

    Your Answer is :-

    Freshersworld.com Answer is :-P-N junctions

12. The advantage of a semiconductor strain gauge over the normal strain gauge is that –

Your Answer is :-

Freshersworld.com Answer is :- it is more sensitive

13. Barrier potential in a P-N junction is caused by –

Your Answer is :-

Freshersworld.com Answer is :- diffusion of majority carriers across the junction

14. When an NPN transistor is properly biased then most of the electrons from the emitter –

Your Answer is :-

Freshersworld.com Answer is :-pass through the base to the collector

15. The value of r when a transistor is biased to cut off is –

Your Answer is :-

Freshersworld.com Answer is :- 1.0

16. A UJT can –

Your Answer is :-

Freshersworld.com Answer is :-be triggered by two of its three terminal only

17. An SCR can only be turned off via it's –

Your Answer is :-

Freshersworld.com Answer is :- anode

18. Gold is often diffused into silicon DN junction devices to –

Your Answer is :-

Freshersworld.com Answer is :- reduce the recombination rate

<p style="text-align:center;">Chapter – 3</p>

19. With n nodes and b branches a network will have –

Your Answer is :-

Freshersworld.com Answer is :-b – n + 1 links

20. When a network has 10 nodes and 17 branches in all then the number of node pair voltages would be -

Your Answer is :-

21. Freshersworld.com Answer is :- 45

A two port network having a 6 dB loss will give –

Your Answer is :-

Freshersworld.com Answer is :- an output power which is one – quarter of the input power

22. While transporting a sensitive galvanometer –

Your Answer is :-

Answer is :- critical damping resistance is connected across the terminals

23. A T type attenuator is designed for an attenuation of 40 dB and terminating resistance of 75 ohms. Which of the following values represent full series and R_1 and shunt arm R_2 ?

1. $R_1 = 147\Omega$ 2. $R_1 = 153W$

3. $R_2 = 1.5\Omega$ 4. $R_2 = 3750W$

Your Answer is :-

Freshersworld.com Answer is :- 1 and 3

24. For a transmission line, the characteristic impedance with inductance 0.294μ H/m and capacitance 60pF/m is –

Your Answer is :-

Freshersworld.com Answer is :-70w

25. When the graph of a network has six branches with three tree branches then the minimum number of equations required for the solution of the network is –

Your Answer is :-

Freshersworld.com Answer is :-3

26. Consider the following statement for a 2-port network

1. $Z_{11} = Z_{22}$ 2. $h_{12} = h_{21}$

3. $Y_{12} = -Y_{21}$ 4. $BC – AD = -1$

then the network is reciprocal if and only if –

Your Answer is :-

Freshersworld.com Answer is :-4 alone is correct

27. As a network contains only independent current sources and resistors then if the values of all resistors are doubled then the values of the node voltages are –

Your Answer is :-

Freshersworld.com Answer is :- will become double

Chapter – 4

28. The energy of electric field due to a spherical charge distribution of radius r and uniform charge density ☐ in vacuum is-

Your Answer is :-

$$c.\ 5.4 \times 10^9 . \frac{Q^2}{r} \text{ where } Q = \frac{4}{3}\pi r^3\sigma$$

Freshersworld.com Answer is :- .

29. Maxwell's divergence equation for the magnetic field is given by .

Your Answer is :-

$$b.\ \overline{\gamma}$$

Freshersworld.com Answer is :-

30. When a short grounded vertical antenna has a length L which is 0.05 l at frequency f and if it's radiation resistances at f is R Ohms, then it's radiation resistance at a frequency 2f will be –

Your Answer is :-

Freshersworld.com Answer is :- 4R ohms

31. In a cylindrical cavity resonator, the two modes which are degenerate would include

Your Answer is :-

Freshersworld.com Answer is :- TE_{111} and TM_{011}

32. When an antenna of input resistance 73 ohm is connected to a 50-ohm line and if the losses are ignored then it's efficiency will be nearly

Your Answer is :-

Freshersworld.com Answer is :-. 0.81

33. If an isolated conducting sphere in air has radius = 1/ 4pqe0 it capacitance will be

Your Answer is :-

Freshersworld.com Answer is :- IF

34. When a dominant mode wave guide not terminated in it's characteristic impedance is excited with a 10 GHz signal then if 'd' is the distance between two successive minima of the standing wave in the guide then

Your Answer is :-

Freshersworld.com Answer is :- d = 1.5 cm

35. When a dipole antenna of l/8 length has an equivalent total loss resistance of 1.5 W then the efficiency of the antenna is

Your Answer is :-

Freshersworld.com Answer is :-89.159 %

36. In commercial FM broadcasting, the maximum frequency deviation is normally

Your Answer is :-

Freshersworld.com Answer is :-75 KHz

Chapter – 5

37. Weins bridge is used for measurement of frequency in the applied voltage waveform is measurement of frequency in the applied voltage waveform is –

Your Answer is :-

Freshersworld.com Answer is :- sinusoidal

38. Strain gauge is –

Your Answer is :-

Freshersworld.com Answer is :- an active transducer

39. A high Q coil has –

Your Answer is :-

Freshersworld.com Answer is :- low losses

40. In the case of an instrument reading of 8.3V with a 0 to 150 voltmeter having a guaranteed accuracy of 1% full scale reading, the percentage limiting error is –

Your Answer is :-

Freshersworld.com Answer is :-18.10%

41. The 'h' parameter equivalent circuit of a junction transistor is valid for –

Your Answer is :-

Freshersworld.com Answer is :-Low frequency, small signal operation

42. A system is causal if the output of any time depends only on –

Your Answer is :-

Freshersworld.com Answer is :- Values of input at that time and in the past

43. A iron cored choke is a –

Your Answer is :-

Freshersworld.com Answer is :- Non linear and passive device

44. Poynting vector wattmeter uses –

Your Answer is :-

Freshersworld.com Answer is :-Induction effect

45. Which one of the following is not a transducer in the true sense ?

Your Answer is :-

Freshersworld.com Answer is :-LCD

Chapter – 6

46. The term used to denote a static device that converts ac to dc, dc to ac, dc to dc or ac to ac is –

Your Answer is :-

Freshersworld.com Answer is :-Converter system

47. It is an unidirectional device that blocks the current flow from cathode to anode –

Your Answer is :-

Freshersworld.com Answer is :- SCR

48. An ideal constant current source is connected in series with an ideal constant voltage source. Considering together the combination will be a –
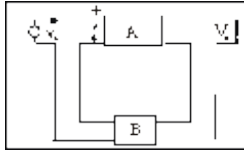
Your Answer is :-

Freshersworld.com Answer is :-constant current source

49. Anode current in an thyristor is made up of –

Your Answer is :-

Freshersworld.com Answer is :- electrons and holes

50. For a pulse transformer, the material used for its core and the possible turn ratio from primary to secondary are respectively –

Your Answer is :-

Freshersworld.com Answer is :-ferrite : 1 : 1

51. A converter which can operate in both 3 pulse and 6 pulse modes is a –

Your Answer is :-

Freshersworld.com Answer is :-3 phase semi converter

52. A single phase CSI has capacitor C as the load. For a constant source current, the voltage across the capacitor is –

Your Answer is :-

Freshersworld.com Answer is :-triangular wave

53. . A single phase full wave midpoint thyristor converter uses a 230/200V transformer with centre tap on the secondary side. The P.I.V per thyristor is –

Your Answer is :-

Freshersworld.com Answer is :- 282.8V

54. In dc choppers for chopping period T, the output voltage can be controlled by FM by varying –

Your Answer is :-

Freshersworld.com Answer is :- T keeping T_{on} constant

<div align="center">Paper – II</div>

<div align="center">Chapter – 1</div>

55. From the hot metal surface electrons escape because

Your Answer is :-

Freshersworld.com Answer is :-the energy supplied is greater than the work function .

56. The most common device used for detection in radio receivers is –

Your Answer is :-

Freshersworld.com Answer is :- diode

57. In a full wave rectifier the negative point in a circuit is

Your Answer is :-

Freshersworld.com Answer is :-The central tap on the high voltage secondary

58. Negative feedback amplifier has a signal corrupted by noise as its input. The amplifier will-

Your Answer is :-

Freshersworld.com Answer is :- Reduce the noise

59. Match the given feedback circuit with it's proper nomenclatures

Your Answer is :-

Freshersworld.com Answer is :-Current series feedback

60. Class A amplifier is used when

Your Answer is :-

Freshersworld.com Answer is :-. Minimum distortion is desired

61. Identify the correct match for the given transistor
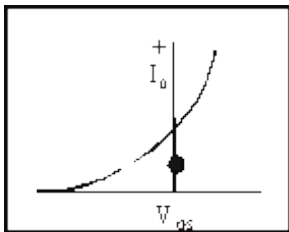
Your Answer is :-

Freshersworld.com Answer is :-Depletion type N channel MOSFET

62. In case a signal band limited to fm is sampled at a rate less than 2fm, the constructed signal will be

Your Answer is :-

Freshersworld.com Answer is :-Distorted

Chapter – 2

63. Quad 2 input AND gates IC No is –

Your Answer is :-

Freshersworld.com Answer is :- 7408

64. Registers in which data is entered or taken out in serial form are referred as –

Your Answer is :-

Freshersworld.com Answer is :-shift registers

65. The expression $\overline{ABC}$ can be simplified to

Your Answer is :-

Freshersworld.com Answer is :- d. $\overline{A} + \overline{B} + \overline{C}$

66. An ideal power supply consist of –

Your Answer is :-

Freshersworld.com Answer is :-Zero internal resistance

67. The linearity error for a digital input is indicated by –

    Your Answer is :-

    Freshersworld.com Answer is :-

68. Register and counters are similar in the sense that they both –

    Your Answer is :-

    Freshersworld.com Answer is :- made from an array of flip flops and gates integrated on a single chip

69. In the 8421 BCD code the decimal number 125 is written as –

    Your Answer is :-

    Freshersworld.com Answer is :-1111101

70. 70In D/A converter, the resolution required is 50mv and the total maximum input is 10v. The number of bits required is

    Your Answer is :-

    Freshersworld.com Answer is :- 8

    Chapter – 3

71. On differentiation unit impulse function results in --

    Your Answer is :-

    Freshersworld.com Answer is :-Unit doublet.

72. Read the following;

    i. Routh Hermitz`s criterion is in time domain.

    ii. Root locus plot is in time domain.

    iii. Bode plot is in frequency domain.

    iv. Nyquist criterion is in frequency domain.

    Your Answer is :-

    Freshersworld.com Answer is :-All four are correct.

73. The maximum phase shift that can be provided by a lead compensator with transfer function.

    Your Answer is :-

    Freshersworld.com Answer is :-. 30^0

74. The correct sequence of steps required to improve system stability is –

    Your Answer is :-

Freshersworld.com Answer is :-Use negative feedback, reduce gain, insert derivative action.

75. Identity slope change at w = 10 of the magnitude v/s frequency characteristic of a unity feedback system with the following open-loop transfer function –

Your Answer is :-

Freshersworld.com Answer is :- –40dB/dec to –20dB/dec

76. In the feedback control system the loop transfer function is given by –

Number of asymptotes of its root loci is

Your Answer is :-

Freshersworld.com Answer is :-4

77. In a closed – loop transfer function

the imaginary axis intercepts of the root loci will be –

Your Answer is :-

Freshersworld.com Answer is :-

78. Considering the following statement :

In a magic tee

1. the collinear arms are isolated from each other

2. one of the collinear is isolated from the E-arm

3. one of the collinear arm is isolated from the H-arm

4. E-arm and H-arm are isolated from each other.

Of these statements

Your Answer is :-

Freshersworld.com Answer is :- 1 and 4 are correct

Chapter – 4

79. In 1965 first geostationary satellite was launched called -

Your Answer is :-

80. watt of power is received from sun per m^2 surface area of a geosynchronous satellite

Your Answer is :-

81. The ripple factor in an LC filter

Your Answer is :-

82. In different parts of the country identical telephone numbers are distinguished by their –

Your Answer is :-

83. Amplitude modulation is used for broadcasting because

Your Answer is :-

84. The amplifiers following the modulated stage in a low level modulation AM system be

Your Answer is :-

85. In a radar system maximum unambiguous range depends on

Your Answer is :-

86. In composite video waveform the function of the serrations, is to

Your Answer is :-

Chapter – 5

87. The frequency range 30MHz – 300MHz is –

Your Answer is :-

88. Which wave cannot exist inside wave guide –

Your Answer is :-

89. Ionosphere layer of earth is situated at –

Your Answer is :-

90. A two cavity klystron tube is a –

Your Answer is :-

91. As the thermal noise get doubled due to the increase in a resistance the noise power get –

Your Answer is :-

Freshersworld.com Answer is :-unchanged

92. Which one is a cross field tube –

Your Answer is :-

Freshersworld.com Answer is :-Magnetron

93. . The degree of coupling depends on –

Your Answer is :-

Freshersworld.com Answer is :-. size and location of holes

94. The thermal noise depends on –

Your Answer is :-

Freshersworld.com Answer is :- resistive component of resistance

Chapter - 1

95. The charge on a hole is –

Your Answer is :-

b. 1.6×10^{-19}

Freshersworld.com Answer is :-

96. In a radio receiver the IF amplifier

Your Answer is :-

Freshersworld.com Answer is :- is fixed tuned to one particular frequency

97. A duplexer is used to

Your Answer is :-

Freshersworld.com Answer is :- prevent interference between two antennas connected to a receiver

Chapter- 2

98. Intel's 8085 microprocessor chip contains

Your Answer is :-

Freshersworld.com Answer is :-. seven 8 bit registers

99. Boolean algebra is based on –

Your Answer is :-

Freshersworld.com Answer is :-. logic

100.When A = 0, B = 0, C = 1 then in 2 input logic gate we get - - gate

Your Answer is :-

Freshersworld.com Answer is :- NAND

101.With the beginnings of space travel, we entered a new - -

Your Answer is :-

Freshersworld.com Answer is :- Era of great history

102. An - - though it mourns the death of someone, need not be sad.

Your Answer is :-

Freshersworld.com Answer is :- Elegy

103. If stare is glance so gulp is –

Your Answer is :-

Freshersworld.com Answer is :-. Sip

104. He hardly works means –

Your Answer is :-

Freshersworld.com Answer is :-. He work very little

105. Give the opposite word for pulchritude –

Your Answer is :-

Freshersworld.com Answer is :-unsightliness

106. Nanometre is - - - - part of a metre.

Your Answer is :-

Freshersworld.com Answer is :- Ten billionth

107. Malaria affects

Your Answer is :-

Freshersworld.com Answer is :-Spleen

108. Sindhu Rakshak is a/an

Your Answer is :-

Freshersworld.com Answer is :-. Anti-aircraft gun

109. With which subject is "Dada Saheb Phalke Award" associated?

Your Answer is :-

Freshersworld.com Answer is :- Best documentary

110. Who developed the branch of mathematics known as Calculus?

Your Answer is :-

Freshersworld.com Answer is :-. Newton

111. In which state is Kanha Park situated?

Your Answer is :-

Freshersworld.com Answer is :-. U.P.

112. Which day is observed as Human Rights Day?

Your Answer is :-

Freshersworld.com Answer is :-. 24th October

113. The Kailash Temple at Ellora is a specimen of

Your Answer is :-

Freshersworld.com Answer is :-. Chola architecture

114.When the two Houses of Parliament differ regarding a Bill then the controversy is solved by

Your Answer is :-

Freshersworld.com Answer is :- Prime Minister of India

115.Which of the following is not the work of Kalidasa?

Your Answer is :-

Freshersworld.com Answer is :- Ritushamhara

116. Amir Khusro was the famous poet and aesthete of

Your Answer is :-

Freshersworld.com Answer is :- Akbar the Great

117. The words 'Satyameva Jayate' have been taken from

Your Answer is :-

Freshersworld.com Answer is :- Vedas

118. Which of the following countries was the first to develop a neutron bomb?

Your Answer is :-

Freshersworld.com Answer is :-. USA

119."Kathakali" dance is connected with

Your Answer is :-

Freshersworld.com Answer is :-Kerala

120. The term "Ashes" is associated with

Your Answer is :-

Freshersworld.com Answer is :- None of these

BSNL Placement Paper

BSNL PAPER ON 5TH JULY,2008

1.Which Sentence is correct:
a.French is known by me.
b.French live in France.
c.France is an European country.
d.Nepolean was a French king.
Ans.b

2.Antonymous of " OBSOLETE":
a.Current b. old c. relative d. neutral
ans.a

3.I am agree _ the project.
a. to b. on c. with d. at
ans.a

4."MY LIFE MY COUNTRY" author's name:
a.L.K. Advani
b.Manmohan Singh
c.Soniya Gandhi
d.Apj Abul Kalam
ans.a

5.India's first Grandmaster lady:
a.koneru hampi
b.s. subrahamanyam
c.c.k. nayadu
d.kiran gosvami
ans.a

6.J.L. Bayard invented:
a.radio b. telephone c. telegraph d. television
ans.d

7.Simla agreement was done between India and _
a. china b. Nepal c. Pakistan d. Bhutan
ans.c

8. Myanmar is not share its boundary with
a. assam b. mizoram c. Manipur d. nagaland .
Ans.a

9. First "ROUND TABLE CONFRESS" between India & Britain was in:
a. Calcutta b. Delhi c. London d.Peris
ans.c

10. Iron man of India is :
a. Lala lajpat rai
b . subhash Chandra bose
c. sardar vallabhai patel
d . pandit jawahar lal nehru
ans.c

11.WORLD TELECOMMUNICATION DAY is on:
a. may 17 b. july 21 c. june 26 d. augast 22
Ans.a

12.Greenhouse Effect is caused by:
a. Carban di oxide b. sulphar di oxidem c. Carban mono oxide d. oxyzen

ans.a

13.Oldest IIT is:
a.IIT, Bombay b. IIT, Guwahati c. IIT, delhi d. IIT,Khadakpur
ans.d

14. Kalpana-I satellite is launched basically for:
a.Distance education
b.Telecommunication & broadcasting
c.Metrological purpose
d.Travel & science
ans.c

15. Radio Waves transmission & receiving phenomenon invented by:

16. HYNYANIKA was a type of:

17. Following Shaded parts of country is producer of:

a. Jute b. Rubber c.tea d.coffee

18 What is the term: "IMMUNOLOGY"

BSNL Placement Paper

BSNL PAPER ON 20TH JUNE,2008

1. For a parallel plate capacitor which is being charged out of the following the incorrect
statement is
a) Energy stored in the capacitor does not enter it through the connecting wire through the space
around the wires and plates of capacitor.
b) Rate at which energy flows into this volume is equal to the integration of the pointing vector
over the boundary of the volume between the plates.
c) The pointing vector points everywhere radially outward of the volume between plates.
d) The pointing vector points everywhere radially into the volume between the plates.
2. The presence of alkali oxides in alumino silicate ceramics is likely to result in dielectric
breakdown due to
a) Polarization
b) Conductivity
c) Structural homogeneties
d) Ionization
3. Which of the following will serve as a donor impurity in silicon
a) Boron b) Indium c) Germanium d) Antimony
4. Electrical contact materials used in switches, brushes and relays must possess

a) High thermal conductivity and high melting point
b) Low thermal conductivity and low melting point
c) High thermal conductivity and low melting point
d) Low thermal conductivity and high melting point
5. The Maximum spectral response of the germanium and silicon is in the
a) infrared region b) ultraviolet region c) visible region d) x-ray region
6. For an insulating material, dielectric strength and dielectric loss should be respectively
a) high and high b) low and high c) high and low d) low and low
7. In a distortion factor meter, the filter at the front end is used to suppress
a) odd harmonics b) even harmonics c) fundamental component d) dc component
8. The coefficient of coupling between two air core coils depends on
a) mutual inductance between two coils only
b) self inductances of the two coils only
c) mutual inductance and self inductances of the two coils
d) none
9. Modern capacitors which have high capacitance in small size use a dielectric of
a) paper b) rubber c) ceramic d) Mylar
10. In any atom the potential energy of an orbiting electron is
a) always positive
b) always negative
c) sometime positive, sometime negative
d) numerically less than its kinetic energy
11. A DE MOSFET differs from a JFET in the sense that it has no –
a) channel b) gate c) P-N junctions d) substrate
12. The advantage of a semiconductor strain gauge over the normal strain gauge is that
a) it is more sensitive
b) it is more linear
c) it is less temperature dependent
d) it's cost is low
13. Barrier potential in a P-N junction is caused by
a) thermally generated electrons and holes
b) diffusion of majority carriers across the junction
c) migration of minority carriers across the junction
d) flow of drift current
14. When an NPN transistor is properly biased then most of the electrons from the emitter
a) recombine with holes in the base
b) recombine in the emitter itself
c) pass through the base to the collector
d) are stopped by the junction barrier
15. The value of r when a transistor is biased to cut off is –
a) 0.5 b) 0 c) 1.0 d) 0.8
16. A UJT can
a) be triggered by any one of it's three terminals
b) not be triggered
c) be triggered by two of its three terminal only
d) be triggered by all of its terminals only
17. An SCR can only be turned off via it's
a) cathode b) anode c) gates d) none

18. Gold is often diffused into silicon DN junction devices to
a) increase the recombination rate
b) reduce the recombination rate
c) make silicon a direct gap semiconductor
d) make silicon semi-metal
19. With n nodes and b branches a network will have
a) (b + n) links b) b − n + 1 links c) b − n − 1 links d) b + n + 1 links
20. When a network has 10 nodes and 17 branches in all then the number of node pair voltages would be
a) 7 b) 9 c) 10 d) 45
21. A two port network having a 6 dB loss will give
a) an output power which is one – quarter of the input power
b) an output power which is one – half of the input power
c) an output voltage which is 0.707 of the input voltage
d) an output power which is 0.707 of the input power
22. While transporting a sensitive galvanometer –
a) the terminals are kept shorted
b) critical damping resistance is connected across the terminals
c) the terminals are kept open circuited
d) it does not matter as to what is connected across the terminals
23. A T type attenuator is designed for an attenuation of 40 dB and terminating resistance of 75 ohms. Which of the following values represent full series and R1 and shunt arm R2 ?
1. R1 = 147W 2. R1 = 153W
3. R2 = 1.5W 4. R2 = 3750W
a) 1 and 3 b) 1 and 4 c) 2 and 3 d) 2 and 4
24. For a transmission line, the characteristic impedance with inductance 0.294mH/m and capacitance 60pF/m is
a) 49w b) 60w c) 70w d) 140w
25. When the graph of a network has six branches with three tree branches then the minimum number of equations required for the solution of the network is
a) 2 b) 3 c) 4 d) 5
26. Consider the following statement for a 2-port network
1. $Z_{11} = Z_{22}$ 2. $h_{12} = h_{21}$
3. $Y_{12} = -Y_{21}$ 4. BC − AD = -1
then the network is reciprocal if and only if
a) 1 and 2 are correct
b) 2 and 3 are correct
c) 3 and 4 are correct
d) 4 alone is correct
27. As a network contains only independent current sources and resistors then if the values of all resistors are doubled then the values of the node voltages are
a) will become half
b) will remain high
c) will become double
d) cannot be determined unless the circuit configuration and the values of the resistors are known
28. The energy of electric field due to a spherical charge distribution of radius r and uniform charge density d in vacuum is-
Ans. $5.4 \times 10^9 \times Q^2/r$ where $Q = 4/3(pie)r^3d$

29. Maxwell's divergence equation for the magnetic field is given by

Ans. y

30. When a short grounded vertical antenna has a length L which is 0.05 l at frequency f and if it's radiation resistances at f is R Ohms, then it's radiation resistance at a frequency 2f will be

a) R/2 ohms b) R ohms c) 2R ohms d) 4R ohms

31. In a cylindrical cavity resonator, the two modes which are degenerate would include

a) TE111 and TM111

b) TE011 and TM011

c) TE022 and TM111

d) TE111 and TM011

32. When an antenna of input resistance 73 ohm is connected to a 50-ohm line and if the losses are ignored then it's efficiency will be nearly

a) 0.19 b) 0.81 c) 0.97 d) 1.19

33. If an isolated conducting sphere in air has radius = 1/ 4pqe0 it capacitance will be

a) Zero b) IF c) 4pF d) OF

34. When a dominant mode wave guide not terminated in it's characteristic impedance is excited with a 10 GHz signal then if 'd' is the distance between two successive minima of the standing wave in the guide then

a) d = 1.5 cm

b) d is less then 1.5 cm

c) d is greater than 1.5 cm

d) d = 3cm

35. When a dipole antenna of l/8 length has an equivalent total loss resistance of 1.5 W then the efficiency of the antenna is

a) 0.89159 % b) 8.9159 % c) 89.159 % d) 891.59 %

36. In commercial FM broadcasting, the maximum frequency deviation is normally

a) 5 KHz b) 15 KHz c) 75 KHz d) 200 KHz

37. Weins bridge is used for measurement of frequency in the applied voltage waveform is measurement of frequency in the applied voltage waveform is

a) sinusoidal b) square c) rectangular d) triangular

38. Strain gauge is

a) not a transducer

b) an active transducer

c) not an electronic instrument

d) none

39. A high Q coil has

a) large band width b) high losses c) low losses d) flat response

40. In the case of an instrument reading of 8.3V with a 0 to 150 voltmeter having a guaranteed accuracy of 1% full scale reading, the percentage limiting error is

a) 1.810% b) 0.181% c) 18.10% d) 0.0018%

41. The 'h' parameter equivalent circuit of a junction transistor is valid for

a) High frequency, large signal operation

b) High frequency, small signal operation

c) Low frequency, small signal operation

d) Low frequency, large signal operation

42. A system is causal if the output of any time depends only on –

a) Values of input in the past and in the future

b) Values of input at that time and in the past

c) Values of input at that time and in the future
d) None
43. A iron cored choke is a
a) Linear and active device
b) Non linear and passive device
c) Active device only
d) Linear device only
44. Pointing vector wattmeter uses
a) Seebeck effect b) Ferranti effect c) Induction effect d) Hall effect
45. Which one of the following is not a transducer in the true sense ?
a) Thermocouple b) Piezoelectric pick – up
c) Photo voltaic cell d) LCD
46. The term used to denote a static device that converts ac to dc, dc to ac, dc to dc or ac to ac is
a) Converter system b) Inverter c) Chopper d) Thyristor
47. It is an unidirectional device that blocks the current flow from cathode to anode
a) SCR b) PCR c) VCR d) DCR
48. An ideal constant current source is connected in series with an ideal constant voltage source. Considering together the combination will be a
a) constant voltage source
b) constant current source
c) constant voltage and a constant current source or a constant power source
d) resistance
49. Anode current in an thyristor is made up of
a) electrons only b) electrons or holes c) electrons and holes d) holes only
50. For a pulse transformer, the material used for its core and the possible turn ratio from primary to secondary are respectively
a) ferrite : 20 : 1
b) laminated iron : 1 : 1
c) ferrite : 1 : 1
d) powdered iron : 1 : 1
51. A converter which can operate in both 3 pulse and 6 pulse modes is a
a) 1 phase full converter
b) 3 phase half wave converter
c) 3 phase semi converter
d) 3 phase full converter
52. A single phase CSI has capacitor C as the load. For a constant source current, the voltage across the capacitor is
a) square wave b) triangular wave c) step function d) pulsed wave
53. A single phase full wave midpoint thyristor converter uses a 230/200V transformer with center tap on the secondary side. The P.I.V per thyristor is
a) 100V b) 141.4V c) 200V d) 282.8V
54. In dc choppers for chopping period T, the output voltage can be controlled by FM by varying
a) T keeping Ton constant
b) Ton keeping T constant
c) Toff keeping T constant
d) None of the above
55. From the hot metal surface electrons escape because
a) of change of state from metal to gas due to heat.

b) of change of stats from gas to metal.
c) the energy supplied is greater than the work function
d) the energy is greater than Fermi level.
56. The most common device used for detection in radio receivers is –
a) amplifier b) triode c) diode d) transistor
57. In a full wave rectifier the negative point in a circuit is
a) Either cathode
b) Either anode
c) The central tap on the high voltage secondary
d) Either plate
58. Negative feedback amplifier has a signal corrupted by noise as its input. The amplifier will
a) Amplify the noise as much as the signal
b) Reduce the noise
c) Increase the noise
d) Not effect the noise
59. Match the given feedback circuit with it's proper nomenclatures

a) Current series feedback
b) Current shunt feedback
c) Voltage series feedback
d) Voltage shunt feedback

60. Class A amplifier is used when
a) No phase inversion is required
b) Highest voltage gain is required
c) dc voltages are to be amplified
d) Minimum distortion is desired

61. Identify the correct match for the given transistor

a) Enhancement type P channel MOSFET
b) Depletion type N channel MOSFET
c) Enhancement type N channel MOSFET
d) Depletion type P channel MOSFET
62. In case a signal band limited to fm is sampled at a rate less than 2fm, the constructed signal will be
a) Distortionless
b) Small in amplitude
c) Having higher frequencies suppressed
d) Distorted
63. Quad 2 input AND gates IC No is
a) 7411 b) 7404 c) 7400 d) 7408
64. Registers in which data is entered or taken out in serial form are referred as
a) left shift register b) right shift register c) shift registers d) none of the above
65. The expression ABC can be simplified to
Ans. A + B + C
66. An ideal power supply consist of
a) Very small output resistance

b) Zero internal resistance
c) Very large input resistance
d) Very large output resistance
67. The linearity error for a digital input is indicated by
68. Register and counters are similar in the sense that they both
a) count pulses
b) store binary operation
c) shift registers
d) made from an array of flip flops and gates integrated on a single chip
69. In the 8421 BCD code the decimal number 125 is written as
a) 1111101 b) 0001 0010 0101 c) 7D d) None of the above
70. In D/A converter, the resolution required is 50mv and the total maximum input is 10v. The number of bits required is
a) 7 b) 8 c) 9 d) 200
71. On differentiation unit impulse function results in
a) Unit parabolic function.
b) Unit triplet.
c) Unit doublet.
d) Unit ramp function.
72. Read the following;
i. Routh Hermitz`s criterion is in time domain.
ii. Root locus plot is in time domain.
iii. Bode plot is in frequency domain.
iv. Nyquist criterion is in frequency domain.
a) 2, 3, and 4 are correct
b) 1, 2 and 3 are correct
c) 3 and 4 are correct
d) All four are correct.
73. The maximum phase shift that can be provided by a lead compensator with transfer function.
a) 150 b) 450 c) 300 d) 600
74. The correct sequence of steps required to improve system stability is
a) Insert derivative action, use negative feedback, reduce gain.
b) Reduce gain, use negative feedback, insert derivative action.
c) Reduce gain, insert derivative action, use negative feedback.
d) Use negative feedback, reduce gain, insert derivative action.
75. Identity slope change at w = 10 of the magnitude v/s frequency characteristic of a unity feedback system with the following open-loop transfer function
a) –40dB/dec to –20dB/dec
b) 40dB/dec to 20dB/dec
c) –20dB/dec to –40dB/dec
d) 40dB/dec to –20dB/dec
76. In the feedback control system the loop transfer function is given by
Number of asymptotes of its root loci is
a) 1 b) 2 c) 3 d) 4
77. In a closed – loop transfer function
the imaginary axis intercepts of the root loci will be
78. Considering the following statement :
In a magic tee

1. the collinear arms are isolated from each other
2. one of the collinear is isolated from the E-arm
3. one of the collinear arm is isolated from the H-arm
4. E-arm and H-arm are isolated from each other.
Of these statements
a) 1 and 2 are correct
b) 1 and 3 are correct
c) 1 and 4 are correct
d) 2 and 3 are correct
79. In 1965 first geostationary satellite was launched called
a) ANIK
b) EARLY BIRD (Intel sat -1)
c) WESTAR
d) MOLNIYA
80. --- watt of power is received from sun per m2 surface area of a geosynchronous satellite
a) 100 b) 500 c) 2000 d) 1000
81. The ripple factor in an LC filter
a) Increases with the load current
b) Increases with the load resistance
c) Remains constant with the load current
d) Has the lowest value
82. In different parts of the country identical telephone numbers are distinguished by their
a) Language digits b) Access digits c) Area codes d) Central office codes
83. Amplitude modulation is used for broadcasting because
a) it is move noise immune than other modulation systems
b) compared with other systems it requires less transmitting power
c) its use avoids receiver complexity
d) no other modulation system can provide the necessary bandwidth for high fidelity
84. The amplifiers following the modulated stage in a low level modulation AM system be
a) linear amplifier
b) harmonic generators
c) class C power amplifiers
d) class B untuned amplifiers
85. In a radar system maximum unambiguous range depends on
a) maximum power of the transmitter
b) pulse repetition frequency
c) width of the transmitted pulse
d) sensitivity of the radar receiver
86. In composite video waveform the function of the serrations, is to
a) equalize the charge in the integrator before the start of vertical retrace.
b) help vertical synchronization
c) help horizontal synchronization.
d) simplify the generation of the vertical sync pulse
87. The frequency range 30MHz – 300MHz is
a) medium frequency
b) very high frequency
c) super high frequency
d) Infrared frequency

88. Which wave cannot exist inside wave guide
a) TE b) TM c) TEM d) HE
89. Ionosphere layer of earth is situated at
a) upto 18kms from earth
b) from 18 to 70 km
c) 70 to 500 km
d) above 500 km
90. A two cavity klystron tube is a
a) velocity modulated tube
b) frequency modulated tube
c) Amplitude modulated tube
d) simple triode
91. As the thermal noise get doubled due to the increase in a resistance the noise power get
a) doubled b) quadrupted c) unchanged d) halved
92. Which one is a cross field tube
a) Klystron b) Reflex Klystron c) Magnetron d) TWT
93. The degree of coupling depends on
a). size of hole
b). location of holes
c). size and location of holes
d). not depend on size or location of hole
94. The thermal noise depends on
a) direct current through device
b) resistive component of resistance
c) reactive component of impedance
d) load to connected
95. The charge on a hole is
Ans. 1.6x10-19
96. In a radio receiver the IF amplifier
a) is tuned above the stations incoming frequency
b) amplifies the output of local oscillator
c) is fixed tuned to one particular frequency
d) can be tuned to various isolate frequencies
97. A duplexer is used to
1) couple two antennas to a transmitter without interference
2) isolate the antenna from the local oscillator
3) prevent interference between two antennas connected to a receiver
4) use an antenna for reception or transmission without interference
98. Intel's 8085 microprocessor chip contains
a) seven 8 bit registers
b) 8 seven bits registers
c) seven 7
d) eight 8
99. Boolean algebra is based on
a) numbers b) logic c) truth d) symbols
100. When A = 0, B = 0, C = 1 then in 2 input logic gate we get - - gate
a) XOR b) AND c) NAND d) NOR
101. With the beginnings of space travel, we entered a new - -

a) Era of great history b) List c) Book d) Year

102. An - - though it mourns the death of someone, need not be sad.
a) Funny poem b) Newspaper article c) Orthodox talk d) Elegy

103. If stare is glance so gulp is
a) Sip b) Tell c) Salk d) Admire

104. He hardly works means
a) The work is hard
b) He is hard
c) The work is easy
d) He works very little

105. Give the opposite word for pulchritude
a) antipathy b) unsightliness c) inexperience d) languor

106. Nanometre is - - - - part of a metre.
a) Millionth b) Ten millionth c) Billionth d) Ten billionth

107. Malaria affects
a) Liver b) Spleen c) Intestine d) Lungs

108. Sindhu Rakshak is a/an
a) Aircraft carrier
b) Submarine
c) Multiple-purpose fighter
d) Anti-aircraft gun

109. With which subject is "Dada Saheb Phalke Award" associated?
a) Best film director
b) Best musician
c) Best documentary
d) Best work relating to promotion of Indian film Industry

110. Who developed the branch of mathematics known as Calculus?
a) Aryabhatta b) Newton c) Einstein d) Archimedes

111. In which state is Kanha Park situated?
a) M.P. b) U.P. c) Assam d) W. Bengal

112. Which day is observed as Human Rights Day?
a) 24th October b) 4th July c) 8th August d) 10th December

113. The Kailash Temple at Ellora is a specimen of
a) Gupta architecture
b) Rashtrakuta architecture
c) Chalukya architecture
d) Chola architecture

114. When the two Houses of Parliament differ regarding a Bill then the controversy is solved by
a) Joint sitting of the two Houses
b) President of India
c) Prime Minister of India
d) By a special committee for the purpose

115. Which of the following is not the work of Kalidasa?
a) Meghdoot
b) Raghuvansha
c) Sariputra Prakarma
d) Ritushamhara

116.Amir Khusro was the famous poet and aesthete of

a) Akbar the Great
b) Mahmud Ghaznvi
c) Shah Jahan
d) Alauddin Khilji
117. The words 'Satyameva Jayate' have been taken from
a) Vedas b) Bhagwad Gita c) Mundaka Upanishada d) Mahabharata
e) None of these
118. Which of the following countries was the first to develop a neutron bomb?
a) USA b) USSR c) China d) Pakistan
119. "Kathakali" dance is connected with
a) Kerala b) Rajasthan c) Uttar Pradesh d) Tamil Nadu
120. The term "Ashes" is associated with
a) Hockey b) Cricket c) Soccer d) none of these

BSNL Placement Paper

BSNL PAPER ON 24TH JUNE,2008

1. When a inductive coil connected to a 200 V, 50Hz ac supply with 10A current flowing through it dissipates 1000 watts then which of the following will have least value in ohms
a.) Resistance b.) Reactance c.) Impedance d.) None
2. Oscillator crystal are made of
a.) Silicon b.) Germanium c.) Quartz d.) None
3. For small size, high frequency coils, the most common core material is-
a.)Air b.)Ferrite c.) Powdered ion d.) Steel
4. If we have a parallel plate capacitor of plate area 'A' and plate separatoin t and having a capacity C and a metallic plate r of area A and of negligible thickness is introduced in the capacitor at a distance from either of the two plates as shown in the given figure then the capacity of the capacitor will become
a.) b.) C c.) 2C d.) 4C
5. A superconductor is a
a.) A material showing perfect conductivity and Meissner effect below a critical temperature
b.) A conductor having zero resistance
c.) A perfect conductor with highest di-magnetic susceptibility
d.) A perfect conductor which becomes resistance when the current density through it exceeds a critical value
6. When an inductor tunes at 200 KHz with 624 pF capacitor and at 600 KHz with 60.4 pF capacitor then the self capacitance of the inductor would be
a) 8.05 pF b) 10.05pF c.) 16.01pF d.) 20.01pF
7. Sparking occur when a load is switched off because the circuit has high
a.) Inductance b.) Capacitance c.) Resistance d.) None
8. Sparking between contacts can be reduced by inserting a
a.) Resistance in the line

b.) Capacitor in series with contacts

c.) Capacitor in parallel with contacts

d.) None

9. RF amplifier of an A.M. receiver is normally biased in

a.) Class 'A' b.) Class 'b' c.) Class 'C' d.) None

10. The value of gate voltage for the operation of enhancement of only N channel MOSFET has to be

a.) High positive b.) High negative c.) Low positive d.) Zero

11. The input gate current of a FET is

a.) a few microamperes b.) negligibly small c.) a few milliamperes

d.) a few amperes

12. In the following fig. with R = 30k, the value of current through 2 K resistor is

a.) 25 mA b.) 40 mA c.) 25/16 mA d.) 10 mA

13. A step recovery diode

a.) has on extremely short recovery time

b.) conducts equally well in both directions

c.) is mainly used as a harmonic generator

d.) is an ideal rectifiers of high frequency signals

14. In order to get maximum undistorted output signal from CE amplifier with VCC 10V, the value of VCE (Q) should be approximately

a.) 0.1V b.) 5V c.) 10V d) V

15. In a FET the electrode, which corresponds to collector in bipolar transistor, is

a.) source b.) drain c.) gate d.) none

16. The device which acts like an NPN and a PNP transistor connected base to base and emitter to collector is

a.) Triac b.) UJT c.) Diac d.) SCR

17. A typical optical fibre has

a.) High refractive index core and low refractive index cladding

b.) Low refractive index core and high refractive index cladding

c.) Both a and b d.) None

18. In the following figure circuit diagram of an op-amp based is shown. The ratio is equal to

a.) 9 b.) 11 c.) 10 d.) 21

19. When a loud speaker is connected across the terminals A and B of the network shown in the fig. then its impedance to obtain maximum power dissipation in it will be

a.) 3 − j1 b.) 3 + j9 c.) 7.5 + j 2.5 d.) 7.5 − j 2.5

20. In the lattice network, the value of R for the maximum power transfer to the load

a.) 5 b.) 6.5 c.) 8 d.) 9

21. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (Z0 is the characteristic impedance, Ö is the propagation constant and l is the length of the line

a.) Z0 cot h Öl b.) Z0 cot Öl c.) Z0 tan h.Ö l d.) Z0 tan Öl

22. The approximate thickness of the radome wall should be

a.) l b.) l/4 c.) l/2 d.) l/8

23. A relatively permanent information is stored in

a.) ROM b.) RAM c.) PROM d.) Volatile memory

24. The rise time of the RC network shown in the given figure is approximately equal to

b.) RC c.) 2RC d.) 4RC

25. If in the network shown in the fig. initially a steady state is attained by closing the switch 's'

and then if the switch is opened at t = 0, then the current i(t) through the inductor will be
a.) cos50tA b.) 2A c.) 2cos100tA d.) 2sin50tA
26. When the p network of figure – I and T-network of figure – II are equivalent then the values of R1, R2 and R3 will be respectively
a) 9W, 6W and 6W b.) 6W, 6W and 9W c.) 9W, 6W and 9W d.) 6W, 9W and 6W
27. When the impedance matrices of a two port networks are given by and , then if these two networks are connected in series then the impedance matrix of the resulting two-port network will be
d.) indeterminate
28. Joule/coulomb is the unit of
a.) Electric field potential b.) Potential c.) Charge d.) None
29. The electric field line and equipotential lines-
a.) Are parallel to each other
b.)Are one and same
c.) Cut each other orthogonally
d.)Can be inclined to each other at any angle
30. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (When Z0 is the characteristic impendence g is the propagation constant and L is the length of the line
31. When two equal positive point charges are placed along X- axis at X1 and –X1 respectively then the electric field vector at a point P on the positive Y-axis will be directed
a.) In the +x direction b.) In the –x direction
c.) In the +y direction d.) In the –y direction
32. The directions of and in TEM mode transmission line with respect to the direction of propagation are
a.) Both and are transverse to the direction of propagation
b.) is and are transverse and h has a component in the direction of propagation
c.) is entirely transverse and has a component in the direction of propagation
d.) is entirely transverse and has a component in the direction of propagation
33. The lowest TM mode in a rectangular waveguide of cross –section a x b with a>b will be
a.) TM01 b.)TE10 c.) TM112 d.)TE11
34. When a transmitter in a free space radiates a mean power of 'p' watts uniformly in all directions then at a distance d sufficiently far from the source in plane the electric field E should be related to p and d as
35. When a dipole antenna was radiating with some excitation in free space radiating a certain amount of the power v if then this antenna is immersed in a lake where water is non-dissipative but has a dielectric constant of 81, then the radiated power with the same excitation will be
a.) Decrease to finite non-zero value b.)Remain the same
c.)Increase d.)Decrease to zero
36. When a (75 – j40)W load is connected to a coaxial line of Z0 = 75 W at 6MHz then the load matching on the line can be accomplished by connecting-
a.) A short – circuited stub at the load
b.)An inductance at the load
c.)A short circuited stub at a specific distance from the load
d.)none of the above
37. As compared to analog multimeters, digital multimeters are –
a.) less accurate b.) more accurate c.) equally accurate d.) none.
38. When a signal of 10 mV at 75 MHz is to be measured then which of the following

instruments can be used

a.) VTVM b.) Cathode ray oscilloscope c.) Moving iron voltmeter
d.) Digital multimeter

39. Which of the following statement is true about two wattmeter method for power measurement in three phase current ?

a.) power can be measured using two wattmeter method only for star connected three phase circuits.
b.) when two meter show indentical readings, in the power factor is 0.5.
c.) when power factor is unit, one of the wattmeter reads zero
d.) when the reading of the two wattmeters are equal but of opposite sign, then the power factor is zero

40. When a capacitance transducer has two plates of area 5cm2 each, separated by an air gap of 2mm than the displacement sensitivity in pf/cm due to gap change would be

a.) 11.1 b.) 44.2 c.) 52.3 d.) 66.3

41. The Q of a radio coil
a.) is independent of frequency
b.) increases monotonically as frequency increases
c.) decreases monotonically as frequency increases
d.) increases upto a certain frequency and then decreases beyond that frequency

42. When a generator of internal impedance and operating at 1GHz feeds a load via a coaxial line of characteristic impedance 50 ohm then the voltage wave ratio on the feed line is

a.) 0.5 b.) 1.5 c.) 2.5 d.) 1.75

43. The coding system typically used in digital telemetry is
a.) PPM (pulse position modulation)
b.) PAM (pulse amplitude modulation)
c.) PCM (pulse code modulation)
d.) PDM (pulse duration modulation)

44. Radiation pyrometers are used for the measurement of temperature in the range of
a.) -2000C to 5000C b.) 00C to 5000C c.) 5000C to 12000C d.) 12000C to 25000C

45. In the given figure band structure is shown. It is of
a.) Gallium Avesenide (GaAs) b.) Silicon (Si) c.) Copper (Cu) d.) Germanium (Ge)

46. When anode is positive with respect to cathode in an SCR, the numbers of blocked p-n junction is

a.) 1 b.) 2 c.) 3 d.) 4

47. The circuit symbol for a GTO is

48. In the given fig. mark out the type of Cyclo converters
a.) 1 phase to 1 phase with continuous conduction
b.) 1 phase to 1 phase with discontinuous conduction
c.) step up device
d.) 3 phase to 1 phase device

49. In the given fig. A-1, C=5, m H and C=20 m F, C is initially charged to 200 V. After the switch.

S is closed at t = 0 the
maximum value of current and the
time at which it reaches this value are respectively.
a.) 400 A, 15.707 mS
b.) 50 A, 30 mS
c.) 100 A, 62.828 mS

d.) 400 A, 31.414 mS

50. In the given circuit the maximum current in the main SCR M can be

a.) 200 A b.) 170.7 A c.) 141.4 A d.) 70.7 A

51. The transfer function of an amplifier is given by

The high 3-db frequency of the amplifier will approximately

a.) 5850 KHZ b.)585 KHZ c.) 5850 HZ d.)585HZ

52. In comparison to full wave rectifier with two diodes the four divide bridge rectifier has the dominant advantage of

a). Higher current carrying

b.) Lower ripple factor

c.) Higher efficiency

d.) Lower peak increase voltage require

53. Power output increase in a class-c amplifier-

a.) If the conduction angle decrease

b). If the conduction angle increase

c.) Are not governed by the conduction angle

d.) None of the above

54. A transistor with hie = 1.5 k and hfe = 75 is used in an emitter follower circuit where R1 and R2 are used for normal biasing . Approximate value of it's current amplification is

a.)75 b.)76 c.)75/76 d.)-75

55. Amplifier of class B has high theoretical efficiency of 78.5 percent because-

a.) It is biased almost to saturation

b.)Its quiescent current is low

c.)It's output is an exact replica of it's input

d.)It is biased well below cut off

56. The coupling that produces minimum interference with frequency response is

a.) Direct coupling b.)Impedance coupling

c.) R C coupling d.)Transformer coupling

57. In the circuit shown in the given figure Rf provides

a.) Current series feedback

b.) Current shunt feedback

c.) Voltage series feedback

d.) Voltage shunt feedback

58. Mark the correct relation for the junction transistor

59. Data in the serial form can be converted into parallel form by using –

a.) PISO shift register

b.) SOIP shift register

c.) SIPO shift register

d.) POIS shift register

60. PROMs are used to store

a.) bulk information

b.) information to be accessed rarely

c.) sequence information

d.) relatively permanent information

61. The horizontal axis in a 3 bit unipolar D/A converter represents

a.) Output bit combination

b.) analog output voltage

c.) input bit combination

d.) none of the above

62. 'Not allowed' condition in NAND gate SR flip flop is

a.) s = 0, R = 0 b.) s = 1, R = 1 c.) s = 0, R = 1 d.) s = 1, R = 0

63. Name the fastest logic family

a) TTL b.) RTL c.) DCTL d.) ECL

64. Equation corresponding to De Morgan's theorem in Boolean Algebra is

a.) (A+B) (A+B) = AA + AB + BA + BB

c.) A + AB = A

d.) None of the above

65. In the given fig find radix of the system

a.) 2 b.) 4 c.) 6 d.) 8

66. Modems are used for data transmission telephone lines to

a.) increase the transmission capacity

b) improve noice performance

c.) incorporate error control coding

d.) eliminate dc component in the transmitted signal

67. The figure of a control system is shown. The maximum value of gain K for which the system is stable is

a.) b.) 3 c.) 4 d.) 5

68. Identify the example of open-loop system-

a.) A windscreen wiper b.) Aqualung

c.) Respiratory system of an animal

d.) A system for controlling Anti-rocket missiles.

69. Consider the following expressions indicating the step or impulse response of an initially relaxed control system

1. $(5 - 4e-2+)$ u(t)

2. $(e-2t +5) (u(t))$

3 .V(t) + 8e-2t u(t)

4 . V(t) + 4e-2t 4(t)

Those which correspond to the step and impulse response of the same system include

a.) 1&3 b.) 1&4 c.) 2&4 d.) 1&4

70. A system is described by

To test its stability by Lyapunov's method the following V functions are considered.

Mark the most suitable V-function in this case-

a.) Only V1 b.) Only V2 c.) Both V1 and V2 d.) Neither V1 nor v2

71. Identity the polar plot of a typical type zero system with open loop transfer function

72. The scattering matrix of a magic –tee shown in the given figure is-

73. Which is the following relate to rational transfer function of a system

1. Ratio of Fourier transform of output to input with zero initial conditions.

2. Ratio of Laplace transform of output to input with zero initial conditions.

3. Laplace transform of system impulse response.

4. Laplace transform of system unit step response select the correct answer using the codes given below.

Codes

a.) 1 and 4

b.) 2 and 3

c.) 1 and 3

d.) 2 and 4

74. For the signal g (t) – 10 cos (50 pt) cos2 (150at)
The Nyquist sampling state in t seconds is
a.) 150 samples per second b.) 200 samples per second
c.) 300 samples per second d.) 350 samples per second
75. In the case of a 70 MHz 1F carries for a transponder band width of 36 MHz; energy must lie between – MHz.
a.) 34 and 106 b.) 52. And 88 c.) 106 and 142 d.) 34 and 142
76. Radar used to eliminate clutter in navigational application is
a.) Pulse radar b.) Tracking radar c.) MTI radar d.) Mono pulse radar
77. The 1.55 mm windows is not yet in use with fiber optic systems because
a.) The attenuation is higher than at 0.85 mm
b) The attenuation is higher than at 1.3mm
c.) Suitable laser devices have not yet been developed
d.) It does not lend itself to wavelength multiplexing
78. Pre-emphasis in FM systems involves
a.) Compression of the modulating signal
b.) Expansion of the modulating signal
c.) Amplification of lower frequency components of the modulating signal.
d.) Amplification of higher frequency components of the modulating signal.
79. In a terrestrial microwave system transmission of signals is achieved through
a.) reflection from the ionosphere b.) line of sight mode
c) reflection from the ground d.) diffraction from the stratosphere.
80. Casse grain feed is used with a parabolic reflector to
a.) increase the gain of the system
b). increase the bandwidth of the system
c.) reduce the size of the main reflector
d.) allow the feed to be placed at a convenient point.
81. In most microwave communication link rain drop attenuation is caused due to
a.) scattering of microwaves by water drops of specific size.
b) scattering of microwaves by a collection of droplets acing as a single body.
c.) absorption of microwaves by water and consequent heating of the liquid
d.) absorption of the microwaves by water vapor in the atmosphere.
82. Circuit in the given figure represents.
a.) an astable multivibrator b.) A monostable multivibrator
c.) Voltage controlled oscillator d.) Ramp generator
83. . . D = r is-
a.) Maxwell's 1st equation b.) Maxwell's II equation
c.) Maxwell's III equation d.) Maxwell's IV equation
84. In a rectangular wave-guide which TM mode exists
a.) TM00 b.) TM01 c.) Tm10 d.) TM11
85. In directional coupler a portion of power two velliry fram port 1) to port 2) is coupled to.
a). port 4 b). port 3 c.) port 2. d.) port 3 & 4.
86. For high power i.e. 10 w to 50 kw measurement
a.) Barometer are used b.) Thermisters are used
c.) Calorimetric technique d.) Calorimetric watt meter technique used
87. The difference between TWT & klystron is
a.) In TWT electrons are in contact with RF field for long time & in klystron for short time
b.) In klystron electrons are in contact with RF field for long time & in TWT for short time

c.) In klystron there is no contact in RF field & electrons while in TWT there is contact
d.) In TWT phase is no contact is RF field & electrons while in klystron there is contact
88. Which one is most suitable for transmission through wave guide
a.) Hown antennas b.) Bioconical antennas c.) helical antenna d.) Discone
89. The skip distance of microwave is given by
90. How many general purpose registers 8085mp
a.) 4 b.) 6 c.) 8 d.) 10
91. 8085 mP has no. of addressing modes
a.) 2 b.) 3 c.) 4 d.) 5
92. What will be status of z and c y flag after execution of SUB A instruction
a.) z = 0, cy = 0 b.) z = 0, cy = 1 c.) z = 1, cy = 0 d.) z = 1, cy = 1
93. Microprocessor accept interrupt only if.
a.) interrupt flip flop disabled.
b.) when INTA signal is low.
c.) interrupt flip flop enabled.
d.) none of above.
94. Microprogramming is a technique
a.) for programming the microprocessor
b.) for writing small programs efficiently
c.) for programming the control steps of computer
d.) for programming o/p / i/p
95. High level programs like C are converted into machine language with the help of
a.) interpreter b.) compiler c.) operating d.) system
96. (10110011)2 = (?)8
a.) 253 b.) 263 c.) 273 d.) 283
97. A Not gate at the output of AND gate converts AND gate into
a.) NAND b.) NOR c.) AND d.) NOPE.
98. The O/P of a logic gate is the gate must be
a.) AND b.) OR c.) NAND d.) X-OR
99. A symbol of JK flip flop is
100. A demultiplener
a.) has multiple i/p and single o/p
b.) has multiple i/p and multiple o/p
c.) has multiple i/p and multiple o/p
d.) has single i/p and single o/p
101. Which of the following best describes the authour`s attitude toward fairy tales ?
a.) fascination b.) open approval. c.) Indulgent tolerance. d.) Scornful.
102. What type of sentence is this ?
Hurray! We won the match
a.) Exclamatory b.) assertive c.) Negative d.) Affirmative
103. Before which of the following word will you put 'a'
a.) hour b.) M. A. c.) Umbrella d.) Man
104. The noun form of 'fresh' is
a.) freshly b.) freshen c.) fresheners d.) fresh itself
105. The word 'clang' is an example of
a.) Simile b.) inversion c.) onomatopoeia d.) irony
106. The Forbes magazine acclaimed Azim Premji as richest India's is the chairman of
a.) Pentafour software b) Infosys c.) IBM d.) Wipro

107. Bharat Ratna award for the year 2001 goes to
a.) Lata Mangeshkar and Zakeer Hussain
b.) Zakeer Hussain and Bismillah Khan
c.) Bismillah Khan and Lata Mangeshkar
d.) Lata Mangeshkar and Ustad Amzad Ali Khan

108. Mr. George W-Bush takes over as ------ President of the united states of America succeeding Mr. Bill Clinton-
a.) 42nd b.) 43rd c.) 40th d.) 45th

109. New Chief Minister of Pondicherry is
a.) T. Venkat Naidu b.) K. Hari Harh c.) N. Rengaswany d.) M. Mudliar

110. No court has the jurisdiction to interfere with the election process once set in motion by the Election commission. This is enshrined in Article
a.) 311 b.) 329 c.) 356 d.) 365

111. Ostrich is a
a.) Running bird b.) Flying bird c) Swimming bird d.) Migratory bird

112. The main atmospheric gas responsible for green house is
a.) Oxygen b.) Nitrogen c.) Ozone d.) Carbon-dioxide

113. Which of the following is not a Kharif Crop
a.) Rice b.) groundnut c.) Sugarcane d.) gram

114. The function of World Bank is to
a.) Help in reconstruction and development of world economy
b.) Facilitate poor countries to trade on concessional rates
c.) Promote growth of international trade and equilibrium in balance of payments
d.) Ease trade barriers and establish rule of fair trade

115. Speed of sound is maximum in
a.) Water b.) Air c.) Steel d.) Vacuum

116. "Long years ago we made a trust with destiny." Whose words are these-
a.) Subhash Chandra Bose b.) Jawaharlal Nehru
c.) Lajpat Rai d.) Bhagat Singh

117. Durand cup is associated with
a.) Hockey b.) Tennis c.) Football d.) Badminton

118. Rabindranath Tagore was awarded the Nobel Prize in literature in the year.
a.) 1908 b.) 1910 c.) 1913 d.) 1914

119. India successfully conducted its first underground nuclear experiment at Pokhran in Rajasthan on
a.) May 18, 1975 b.) May 20, 1974 c) May 17, 1974 d.) May 17, 1974

120. An emergency loan of $ 500 million to help reconstruct infrastructure in earth quake devastated Gujarat approved by-
a.) Asian development Bank b.) World Bank c.) Swiss Bank d.) Reserve Bank of India

BSNL GE-JTO Recruitment Examination - Test Paper - III

BSNL GE-JTO Recruitment Examination

Test Paper - III

Of the following bridges the one which can be used for the measurement of dielectric loss of a capacitor is –

a.) Schering bridge

b..) Heaviside campbell equal ratio voltage

c) Owen bridge

d.) Anderson bridge

LBDT is uses as a –

a). Displacement transducer

b.) Pressure transducer

c.) Temperature

d.) Any of the above

Polarization is a measure of -

a.) Dielectric constant per unit volume.

b.)Voltage gradient to produce electrical breakdown

c.) Product of charge and distance

d.)Excess charge density

Compared to the inductive type of transducer, capacitive transducer is superior for the measurement of displacement because of -

a.)Absence of non-linearity

b.) High frequency response

c.) Small size

d.) High accuracy

An incremental model of a solid state device is one which represents the –

a.) ac property of the device at the desired operating point

b.)dc property of the device at all operating points

c.) Complete ac and dc behaviour of the device at all operating points

d.)ac property of the device at all operating points.

 The ac resistance of a forward biased p-n junction diode operating at a bias voltage ,V, and carrying current â€˜Iâ€™ is –

a.)Zero

b.)a constant value independent of Vand I

c.)

d.

A meter is shielded with a soft iron to –

a.)Prevent damage from rough use

b.) Keep moisture out of movement

c.)Protect meter movement from stray magnetic fields

d.) Achieve all of the above

A capacitor that has been connected across a battery for comparatively long time becomesâ€"

a.)Charged

b.) Discharged

c.) Short - circuited

d.) Defective

The charge on the plates of a capacitor is given by the expression â€"

a.) $Q = VI$

b.) $Q = IR$

c.) $Q = CV$

d.) $Q = IC$

Silicon steel used for electrical purposes has silicon percentage of â€"

a.)0.5

b.) 2.5

c.) 3.4

d). None

The feature of VTM is its â€"

a.)Low input impedance

b.)Low power consumbtion

c.)The ability to measure wider ranges of voltage and resistances

d). None

In an N-type semiconductor, the position of the fermi level â€"

a.)Is lower than the centre of the energy gap

b.) Is at the centre of the energy gap

c.)Is higher than the centre of the energy gap

d.)Can be anywhere depending upon the doping concentration

A JFET can operate in â€"

a.) depletion and enhancement model

b.)depletion mode only

c.)enhancement mode only

d.) neither enhancement nor depletion mode

Consider the following semiconductor diodes â€"

a.)Germanium diode

b.)Silicon diode

c.) Tunnel diode

d.) Schottky diode

A diode with a PIV of 50V is likely to break down when rectifying 50v ac supply because –

a.) it is made of defective material

b.) it is incorrectly connected to the supply

c.) peak value of ac supply exceeds the PIV value

d.)ac supply is of extremely high frequency.

The set of transistor characteristics that enables a to be determined directly from the slope is –

a.) CE transfer characteristics

b.)CE output characteristics

c.) CB transfer characteristics

d.) CB input characteristics

For an N-channel JFET, the drain voltage has to be –

a.) positive with respect to the source

b.) negative with respect to the source

c.) uncharged with respect to the source

d.)none

The SCR is often employed as a –

a.)Source-controlled switch

b.)Drain-controlled switch

c.) Gate-controlled switch

d) None

An oscilloscope has an input impedance consisting of 1MW and 20pF in parallel. A high impedance probe connected to the input of this oscilloscope has a 10MW series resistance, this 10MW resistance –

a.) Need not be shunted

b.) Should be shunted by a 2pF capacitor

c.) Should be shunted by a 20pF capacitor

d.)Should be shunted by a 200pF capacitor

Compared to silicon, gallium arsenide (GaAs) has –

a.)Easier to grow crystals since the vapour pressure of arsenic is high

b.)Higher optolectronic conversion efficiency

c.) Both a and b

d). None

When the network shown in the fig draw a current I and if the ends ab are shorted, the current drawn would be –

a.) I

b.) I\ 4

c.) 4 I

d.) 2 I

When all the resistances in the circuit are of one ohm each, then the equivalent resistance across the points A and B will be â€"

a.)1W

b.) 0.5W

c.) 2W

d). 1.5W

Of the following periodic waveforms the one having only odd harmonics of sinusoidal waveform is-

a.)1 and 2

b.) 1 and 3

c.)1 and 4

d.)2 and 4

When in the network shown in the given fig, the switch K is dosed at t = 0 with the capacitor uncharged then the value for at t = 0+ will be â€"

a.)100 amp./sec.

b.)â€"100 amp./sec.

c.)1000 amp./sec.

d.)â€"1000 amp./sec.

For the circuit shown in the given figure, the voltage VAB is â€"

a.)6V

b.)10V

c.)25V

d.)40V

In the network shown in the given fig. current i = 0 when E = 4V, I = 2A and I = 1A when E = 8V, I = 2A. The Thevenin voltage and the resistance into the terminals AB are â€"

a.)4V, 2W

b.) 4V, 4W

c.) 8V, 2W

d.) 8V, 4W

The effective resistance between the terminals A and B in the circuit shown in the fig. is –

a.) R

b.) R-1

c.) R/2

d.) 6/11 R

When in a two terminal network, the open circuit voltage measured at the given terminals by an electronic voltmeter is 100V and a short circuit current measured at the same terminals by an ammeter of negligible resistance is 5A then if a resistor of 80W is connected at the same terminal, then the current in the load resistor will be –

a.)1A

b.) 1.25A

c). 6A

d.) 6.25A

If for the network shown in the following fig. the value of Z(s) is   then the value of C and R are respectively –

In Faraday's induction phenomenon, a changing magnetic field is accompanied by an electric field. Which of the following equation or equations represents it-

The electric potential due to an electric dipole of length L at point distance r away from it will be doubled if the -

a.) Length L of the dipole is doubled

b.) r is doubled

c.) r is halved

d) L is halved

When a particular mode is excited in a waveguide there appears an extra electric component in the direction of propogation . The resulting mode is

a.) Longitudinal electric

b.) Transverse electromagnetic

c.) Transverse magnetic

d). Transverse electric

When for a transmission line the open circuit and short circuit impedance are 20W and 5 W respectively then the characteristic impedance of the line is -

a.) 100 Ohms

b). 50 Ohms

c.) 25 Ohms

d.) 10 Ohms

In an ideal transmission line with matched load, the voltage standing wave ratio and reflection coefficient are respectively -

a.) 1 and 1

b). infinity and 1

c) infinity and 0

d.) 1 and 0

When an electric charge of 100 coulombs is enclosed in sphere of radius 100 m then the electric displacement density (in coulomb / m2) D is â€"

a.) 0.0833

b). 0.833

c.) 1.666

d.) 10

For the dominant mode in a rectangular wavelength with breadth 10 cm, the guide wavelength for a signal of 2.5 GHz will be -

a.) 12 cm

b.) 15 cm

c.) 18 cm

d.) 20 cm

When the phase velocity of an electromagnetic waves depends on frequency in any medium, the phenomenon is called-

a.) Scattering

b.)Polarization

c.) Absorption

d.) Dispersion

Antennas commonly used for microwave links are -

a.) Loop antenna

b.) Log-periodic antennas

c.) Paraboloidal dishes

39. One of the following instrument which may be used to measure the optical activity of compounds is â€"

a.)Infrared spectrometer

b.) Atomic absorption spectrometer

c.) Polarimeter

d.) Flouroscope

Schering bridge measures â€"

a.)Capacitance dielectric loss

b.) Inductance

c.)Resistance

d.) Mutual inductance

When a square wave is fed to an RC circuit, then â€"

a.) voltage across R is square and across C is not square

b.) voltage across C is not square and across R is not square

c.) voltage across both R and C are square

d.) voltage across both R and C are not square

The time constant of the RC circuit is â€"

a.) less than the time period of the input square wave.

b). much larger than the time period of the input square wave.

c.) equal to the time period of the input square wave.

d). none

Harmonic distortion for each frequency can be obtained by harmonic analyser of the â€"

a.)heterodyne type

b.) tuned circuit type

c.) fundamental suppression type`

d.) bridge circuit type.

A three phase wattmeter requires â€"

a). only two current coils and two pressure coils

b.)only one current coil and two pressure coil

c.) only two current coils and one pressure coil

d.) only current coil

A low pass filter circuit is basically â€"

a.) a differentiating circuit with low time constant

b.) a differentiating circuit with large time constant.

c.) an integrating circuit with low time constant.

d.)an integrating circuit with large time constant.

If the differential pressure in restriction type flow measuring devices is   then the flow will be proportional to â€"

When a system is represented by the transfer function then the dc gain of this system is â€"

a.) 1

b.) 2

c.) 5

d.) 10

Silicon based semiconductor device called thyristor was first fabricated by â€"

a). Jell laboratories in U.S.A

b). Maxwell laboratories in U.S.A

c.) Bell laboratories in U.S.A

d). GEC laboratories in U.S.A

A semiconductor based temperature transducer has a temperature coefficient of â€"2500mV/0C. This transducer is indeed a â€"

a.)Thermistor

b.) Forward biased pn junction diode

c.)Reverse biased pn junction diode

d.) FET

Which of the followings pairs of Telemetry situations and Modulation techniques and conditions is correctly matched-

a.)Pulse amplitude modulation   Low amplitude signals

b.)Pulse position modulation   For short distance when power is enough

c.) Pulse width modulation   Power to be spent in telemetry is required to be low

d.) Pulse code modulation.   Minimisation of interference effects.

The SCR ratings di/dt in A/m sec and dv/dt in n/m sec, may vary, respectively between-

a.) 20 to 500, 10 to 100

b.)both 20 to 500

c.) both 10 to 100

d.) 50 to 300, 20 to 500

Match the given controlled rectifiers with 50 Hz supply

a.)1 phase full converter   with source inductance

b.)3 phase full converter

c.)3 phase semiconductor

d.)3 phase halls wave converter

For natural or forced commutation the cyclo converters (CCs) requires as under.

a) natural commutation in both step up and step down CCs

b.) forced commutation in both step up and step down CCs

c.) forced commutation in step up CCs

d). forced commutation in step down CCs

The peak inverse voltage in ac to dc converter system is highest in-

a). single phase full wave mid point converter

b). single phase full converter

c) 3 phase bridge converter

d). 3 phase half wave converter.

A single phase full converter feeds power to RLE load with R = 6 W L = 6 MH and E = 60 V. The ac source voltage is 230 V, 50 Hz, For continuous conduction, the average value of load current for a firing angle delay of 50 is

a.)12.181 A

b). 14.81 A

c). 16.76 A

d.) 32.40 A

Which one of the following is the Fourier transform of the signal given in fig. B if the Fourier transform of the signal in fig A is given by -

What is 215 complement of 00011100-

a.) 11100011

b.) 10001100

c.) 11100100

d.) 10000111

In C programming a expression contains relational operators, assignment operators and arithmetic operators if parentheses is absent then execution follows

a.) assignment, relational, arithmatic

b.) arithmatic, relational, assignment

c.) relational, arithmatic, assignment

d.) assignment, arithmatic, relational

In semiconductor memory information stored in form-

a.) binary

b.) hexadecimal

c.) octal

d.) ASCII

 i\p to Not gate gives o/p as-

a) inversion of some bits

b.) 2's complement of i\p

c.) 1's complement of i\p

d.) o/p is some as i\p

 A negative logic means-

a .)logic 0 and 1 are represented by a +ve voltage respective

b). logic 0 and 1 are presented as –ve and +ve voltage

c.)logic 0 voltage is higher than logic 1 voltage level

d.) logic 0 voltage is lower than logic 1 voltage level

 For designing D flip flop from SR FF a circuit is aloud at 01p of SR FF is-

a.) AND

b.) OR

c.) NOR

d.) NOT

The transistor shown in fig is

a.) Silicon, NPN with Ic = 0.5 mA

b.) Silicon PNP with Ic = 0.5 mA

c.) Germanium PNP with IE = 0.5 mA

d.) Germanium NPN with Ic=0.5 mA

A 20,000 Ohms per volt meter will deflect full-scale with a current of -

a.) 50 mA

b.) 50 mA

c.) 100 mA

d.) 1000 mA

A plate modulated class –CRF power amplifier produces 100 KW of radiated power at 100 % modulation. The modulating audio amplifier supplies approximately -------- kW of this power-

a.)50

b).33

c).22

d).11

An amplifier without feedback has a distortion of 15 % and gain of 40. When 10% negative feedback is applied the distortion will become-

a.) 50 %

b). -45 %

c). 3%

d). -5%

MODEM implies-

a.)Modulator at transmitting side and ditector at the receiving side

b.)Which deals with analog signals and shows digital information

c.)Analog to digital at transmitting side and digital to analog at a receiving side

d.)A device which deals with digital signals only

Twisted ring and ring counters are examples of –

a.)Synchronous counters

b.) Asynchronous counters

c.) both a and b

d.) None of the above

Specify Non characteristic flip flop in the following –

a.) The outputs are complement of each other

b.) The flip flop has two input signals

c.) The flip flop has two output signals

d). The flip flop is a bistable devise with only two stable states

The voltage obtained when digital input is 001 is a 3 bit R-2R ladder DIA converter is-

a.) VR/22

b.) VR/21

c.) VR/23

d.) none of the above

Identify NOT an octal number-

a.) 19

b). 15

c.) 77

d.) 101

The set of binary digits 01000100 represent,s-

a.) number 6810 in a pure binary computer

b.) number 44 in 8421 BCD code

c) Both a and b

d.) None of the above

The system matrix of a continuous time system, described in the state variable form is –

The system is stable for all values of x and y satisfying –

a.)x < 1/2, y < 1/2

b). x < 0, y < 2

c.)x > 1/2 , y >0

d.) x < 0 , y < 1/2

The break away and break in point in the root locus for open loop transfer function G(S) H(S) =
are located respectively at –

a). –2 and -1

b). –2.47 and –3.77

c.) –4.27 and –7.73

d.) –7.73 and –4.27

The transfer function   for the given system shown in figure is –

The type and order of the system whose Nyquist plot is shown in fig is-

a.)0.1

b.) 1,2

c.) 0,2

d). 2,1

The overall transfer function in a second order is given by-

Its resonant frequency is -

a.) 2

b.)

c).

d.) 3

The detection of an AM waveform in an Envelope â€"

a.)One side band and full amplitude carrier are needed

b.) Both side bands and full amplitude carrier are needed

c). Only two side bands are needed

d). Upper side band and part of carriers are needed

Satellite used for intercontinental communication is known as â€"

a.) Comsat

b). Dom sat

c.) Mari sat

d). Intelsat

Mark out non submarine cable â€"

a.)TAT â€" 7

b.) INTELSAT V

c.) ATLANTIS

d.)CANTAT 2

The capacity of an analog communication channel with 4kHz bandwidth and 15 dB SNR is approximately-

a). 20,000 bps

b). 16,000 bps

c.) 10,000 bps

d.) 8,000 bps

The blind speed of an MTl radar can be avoided by changing the-

a.) Carrier frequency

b.) Pulse repetition frequency

c.)Antenna rotation rate

d.) Transmitted power

The output voltage in a feedback series regulator circuit is regulated by controlling the-

a.) Magnitude of the input voltage

b.) Gain of the feedback transistor

c.) Reference voltage

d.) Voltage drop across the series pass transistor

Indicate the signal not transmitted in colour TV-

a.) Y

b.) Q

c.) R

d.) I

As frequency of singal increases-

a.) Directivity increases & beam width increases

b.) Directivity & beam width decreases

c.) Directivity increases & beam width decreases

d.) Directivity decreases & beam width increases

The number of hardware interupts (which require an external signal to interrupt) present in on 8085 mP are

a). 1

b). 4

c.) 5

d.) 13

Highest priority interupt is-

a.)INTR

b.)RST 7.5

c.)RST 6.5

d.)TRAP

One instruction cycle means-

a.)Time require to execute set of instructions

b.)Time require to execute one instruction

c.) Time require to complete one operation of accessing memory, or I/o

d.) None of above

If the clock freq. is 5 mH3 how much time is required to execute on instruction of 18 T-states-

a.)3.6 msec.

b.) 36 m sec.

c.) 36 m sec.

d.) 36 sec.

In data transfer operation which flog get affected-

a.)zero flog

b.)carry flog

c.)sign flog.

d.) none

CMP instruction comes under group -

a.)Data transfer

b.)Brouching operations

c). Machine control operation

d.) logical operations

The logic operation-

a.) are performed in relation to content of Accemce lotor

b).can be performed derectly with content of the register.

c.)are performed without content of a

d.)none of above.

What happen when PUSH instruction executed -

a.) data retrieved from stock to register

b.) data from register saved on the stock.

c.) 16 bit address of instruction saved on stock.

d.) 16 bit address from stock retrieved

SIM stands for-

a.) serial interface memory

b.) set interrupt mosk

c.) set if minus

d.) set internal memory

Maximum clock frequency required to operate 8085-

a.)2 MHz

b.) 3 MHz

c) 6 MHz

d.)9 MHz

ASCII code is-

a). 7 bit

b). 8 bit

c.)16 bit

d.) 32 bit.

In memory mapped I/O address lines are-

a.) 8

b.) 16

c.) 32

d.) 64

The parity bit adding technique is used for -

a.)Indexing

b.)Coding

c.)Error detection

d.)Controlling

A demultiplexer-

a.)has multiple i/p and single o/p

b.) has single i/p and multiple o/p

c.) has multiple i/p and multiple o/p

d.) has single i/p and single o/p

Subroutines are useful-

a.)to reduce storage requirements

b.) to increase programming speed and reduce storage

c.) most applications are same

d.) but increases expense

As daring goes with temerity same way clear-sighted with â€"

a.)Perspicacity

b.) Impulsiveness

c.)Energy

d.)Clemency

A man who visits his friend is a â€"

a.)Host

b.)Guest

c.)Master

d.) Owner

Zealot is â€"

a.)beginner

b.) Patron

c.) fanatic

d.) Murderer

Give the plural of 'Mouse' –

a.)Mouse's

b). Mice

c). Mouse

d). None

Find the part of speech of the underlined word –

Shama and Radha were playing together.

a.)Preposition.

b.)Noun

c.)Conjunction.

d). Verb.

Which of the following is not one of the multiple names of ganesha?

a). Vinayaka

b). Lambodra

c.) Ekadanta

d.) Vighneshwara

e.)all of the above

If a man weighs 60 Kilograms on earth, how much will be his weight on the moon?

a.)50 kg

b.)40 kg

c.)20 kg

d.)10 kg

The only Indian star selected for waxing at the famous Madame Tussaud's wax is-

a.)Salman Khan

b.)Amitabh Bachan

c.)ShahRukh Khan.

d.)Raj Kapoor

 Rate of gowth of per capita income in India drops down to – percent in 2000-2001-.

a.)5.3 percent

b.)3.5 percent

c.)4.8 percent

d.)8.4 percent

Ascorbic acid is the chemical name of-

a.)Vitamin A

b.)Vitamin B

c.)Vitamin C

d.) Vitamin D

All India Muslim League was founded by-

a.)Nawab Slimullah Khan

b.)Sir Mohd Iqubal

c.) Sir syed Ahmed Khan

d.) Moulana Shaukat Ali

Red Blood corpuscles are formed in-

a.)Marrow

b.) Kidney

c). Liver

d). heart

The southern most tip of India is in-

a.)Lakshadweeep

b.) Kanya Kumari

c.)Andaman and Nicobar Islands

d.)Rameswaram

The first bowler in cricket history to take 500 test wickets is-

a.) Imran Khan

b). Courtney Walsh

c). Shane Warne

d.) Muttiah Murlidharan

President of the National Consumer Disputes Redress al Commission (NCDRC) is-

a.) Mr. D.C Wadhwa

b). Mr. A. P Wadhwa

c.) Mr. A. C Wadhwa

d.) Mr. D. P Wadhwa

C.V. Raman got Nobel Prize for-

a.)Themodynamics

b.) Quantum theory

c.)Optics and spectroscopy

d.) Nuclear Physics

First governor general of Bengal-

a). Lord Clive

b.) Lord warren Hastings

c.)Lord Lytton

d.) Lord Ripon

The slogan â€œDo or Dieâ€ö is associated with-

a.) Subhash Chandra Bose

b.) Gandhigi

c.) Harijan

d.) Satyagraha

Champaran is in the state of-

a). Gujarat

b). Maharashtra

c.) Bihar

d). Madhya Pradesh

These tribes are found in central Asia-

a.)Garos

b.)Kirghiz

c.) Lushai

d). Santhals

BSNL GE-JTO Recruitment Examination

BSNL GE-JTO Recruitment Examination

Test Paper - IV

Reactive current through the capacitive load produces -

a) Magnetic field

b) Electric field

c) Supermagnetic field

d) None

One of the following which gives piero-electric effect is -

a) Mu metal

b) PVDF

c) Sapphire

 d) Ferrites

 PZT piezo- electric materials have -

a) Higher curie temperature

b) Lower curie temperature

c) Absolute temperature

d) None

The residual resistivity of a binary alloy at OK is -

a) The sum of the residual resistivities of the component metals

b) The difference of the residual resistivities of the component metals.

c) The product of the residual resistivities of the component metals

d) Dependent on the concentration of the minor component in the alloy

In active filter circuits, inductances are avoided mainly because they -

a) Are always associated with some resistance

b) Are bulky and unsuitable for miniaturisation

c) Are non-linear in nature

d) Saturate quickly

The depletion layer across a p-n junction lies -

a) mostly in the p-region

b) mostly in the n-region

c) equally to both p and n region

d) entirely in the p-region

The voltage induced in a loop of wire rotating in a strong and steady magnetic field is -

a) pulsating dc

b) dc

c) rectified ac

d) ac

One of the following types of capacitor which is polarized is -

a) Electrolytic

b) Ceramic

c) Paper

d) Mylar

Electric shock is-

a) Always fatal

b) Never fatal

c) Sometimes fatal

d) Always disfiguring

A typical value of filter capacitor for 50 Hz ripple is -

a) 16mF

b) 10F

c) 10mF

d) None

A telephone relay armature is made of material with -

a) High electrical conductivity

b) Low electrical conductivity

c) Negligible conductivity

d) None

Larger the value of filter capacitor -

a) Larger is the peak-peak value of ripple voltage

b) Larger is the peak current in the rectifying diode

c) Longer is the time that current pulse flows through the diode

d) Smaller is the dc voltage across the load

Barrier potential in a P-N junction is caused by -

a) Thermally generated electrons and holes

b) Diffusion of majority carriers across the junction

c) Migration of minority carriers across the junction

d) Flow of drift current

The polarity of VGS for E-only MOSFET is -

a) positive

b) negative

c) zero

d) depends on P or N channel

The following which will serve as a donor impurity in silicon -

a) Boron

b) Indium

c) Germanium

d) Antimony

When bias applied to a vari-cap diode is increased, its capacitance -

a) is decreased

b) is increased

c) remains constant

d) first increases and then decreases.

In case of a bipolar transistor a is -

a) positive and greater than 1

b) positive and less than 1

c) negative and greater than 1

d) negative and less than 1

A BJT is -

a) not very sensitive to radiations

b) very sensitive to radiations.

c) independent of radiations

d) none

An SCR may be considered to be -

a) 2 diodes

b) 3 diodes

c) 4 diodes

d) 5 diodes

For a BJT, under the saturation condition -

a) $IC = bIB$

b) $IC > bIB$

c) IC is independent of all other parameters

d) $IC < bIB$

 In modern MOSFET's the material used for the gate is -

a) High purity silicon

b) High purity silica

c) Heavily doped polycrystalline silicon

d) Epitaxial grown silicon

Find the Norton,s equivalent of the circuit given below -

When the source in the circuit shown is a sinusoidal source then the input voltage is -

a) 10V

b) 5V

c) 27V

d) 24V

The time constant of the network shown in the given figure is given by -

The voltage transfer ratio of two-port networks connected in cascade may be conveniently obtained from the -

a) product of the individual ABCD matrices of the two networks

b) product of voltage transfer ratios of the two individual networks

c) sum of the Z- matrices of the two networks

d) sum of the h – matrices of the two networks

When a network has response with time as shown in fig. then which one of the following diagrams represents the location of the poles of this network ?

For the network shown in the given fig. the ratio   is -

An attenuator drops a 10V signal to 50mv in an experiment. The loss in decibels is -

a) –40dB

b) –6dB

c) –55dB

d) –60dB

When the network has 10 nodes and 17 branches then the number of different node pair voltages would be -

a) 7

b) 9

c) 10

d) 45

The circuit shown in the following fig. will act as an ideal current source with respect to terminals A and B when frequency is -

a) zero

b) 1rad/s

c) 4rad/s

d) 16rad/s

When a short vertical grounded antenna is required to radiate at 1MHz and the effective height of the antenna is 30 m then the calculated value of the radiation resistance is -

a) 1.58 W

b) 158 W

c) 15.8 W

d) None of these

 Shannon's law relates -

a) antenna gain to bandwidth

b) frequency to antenna gain

c) antenna gain to transmission losses

d) information carrying capacity to S/N ratio

 One of the following modes which has the characteristic of attenceation becoming less as the frequency is increased and is attractive at <u>microwave</u> frequencies of circular cylindrical wave guides is -

a) TE1 mode

b) TM01 mode

c) TE01 mode

d) Higher order mode

For a transmission line, the propogation constant, for a TEM wave travelling in it is given by (Where the symbols have the usual meanings) -

a) [(R+jwL) (G+jwc)]

b) [R+jwL) (G+jwc)] Â½

c) [(R-jwL) (G + jwc)] Â½

d) [(R-jwL) (G+jw2c)]1/3

The advantages of wave guides over co-axial lines would include which of the following features-

1. Easier to use   2. lower power losses

3. Higher operating frequencies possible

a) 1 and 2

b) 1 and 3

c) 2 and 3

d) 1,2 and 3

When a 75 ohm transmission line is to be terminated in two resistive loads R1 and R2 such that the standing pattern in the two cases have the same SWR , then the values of R1 and R2 (in ohms) should be -

a) 250 and 200 respectively

b) 225 and 25 respectively

c) 100 and 150 respectively

d) 50 and 125 respectively

 The degenerate modes in a wave guide are characterized by -

a) Same cut off frequencies but different field distribution

b) Same cut off frequencies and same field distributions

c) Different cut off frequencies but same field distributions

d) Different cut off frequencies and different field distributions

A TEM wave impinges obliquely on a dielectric-dielectric boundary with Er1=2 and Er2=1, the angle of incidence for total reflection is -

a) 30 0

b) 60 0

c) 45 0

d) 90 0

The radiation pattern of Hertzian dipole in the plane perpendicular to the dipole is a -

a) Null

b) Circle

c) Figure of eight

d) None of the above

40. Permeance is the -

a) square of reluctance

b) reluctance

c) reciprocal of the reluctance

d) cube of the reluctance.

One of the following which is an active transducer is -

a) Photoelectric

b) Photovoltaic

c) Photo-conductive

d) Photo emission

The wein bridge uses only -

a) Inductors

b) Capacitors

c) Resistors

d) Capacitors and Resistors.

The greater the value of Q -

a) higher will be the bandwidth of the resonant circuit.

b) smaller will be the bandwidth of the resonant circuit.

c) nothing can be said)

d) none.

The most serious source of error in a) c) bridge measurement is -

a) eddy currents

b) leakage currents

c) residual imperfectness

d) stray fields.

Moving iron instruments -

a) have a linear scale

b) do not have a linear scale

c) both a and b)

d) none.

If accuracy is the main consideration, which one of the following voltmeters should one select -

a) 100 v ; 2 mA

b) 100 v ; 100 ohm/volt

c) 100 v ; 1mA

d) 10,000 v ; 10 mA

In dc tacho generators used for measurement of speed of a shaft, frequent calibration has to be done because -

a) the contacts wear off

b) the strength of permanent magnet decreases with age

c) the armature current produces heating effect

d) there is back emf.

Ideal transformer cannot be described by -

a) h parameters

b) ABCD parameters

c) G parameters

d) parameters

Consider the following statements -

A3- phase balanced supply system is connected to a 3 phase unbalanced load) Power supplied to this load can be measured using

1. Two wattmeters

2. One wattmeter

3. Three wattmeters

Which of these statements is/are correct?

a) 1 and 2

b) 1 and 3

c) 2 and 3

d) 3 alone

The function of the reference electrode in a pH meter is to -

a) Produce a constant voltage

b) Provide temperature compensation

c) Provide a constant current

d) Measure average pH value

Match the column A (Devices) with column B (Characteristics) and select the correct answer by using the codes given below the column -

Column A	Column B
A) BJT	1. Voltage controlled negative resistance
B) MOSFET	2. High current gain
C) Tunnel diode	3. Voltage regulation
D) Zener diode	4. High input impedance

Codes :

	A	B	C	D
a)	1	4	2	3
b)	2	4	1	3
c)	2	3	1	4
d)	1	3	2	4

A thyristor during forward blocking state is associated with.-

a) large current , low voltage.

b) low current , large voltage.

c) medium current , large voltage

d) low current, medium voltage.

In controlled rectifiers, the nature of load current i.e. whether load current is continuous or discontinuous -

a) does not depend on type of load and firing angle delay

b) depends both on the type of load and firing angle delay

c) depends only on the type of load)

d) depends only on the firing angle delay.

A single phase voltage controller feeds power to a resistance of 10 W . The source voltage is 200 V rms. For a firing angle of 900 , the rms value of thyristor current in amperes is -

a) 20

b) 15

c) 10

d) 5

In the performance of single phase and three phase full converters the effect of source inductance is to

a) reduce the ripples in the load current -

b) make discontinuous current as continuous

c) reduce the output voltage

d) increase the load voltage.

The cycloconverters (CCs) require natural or forced commutation as under -

a) natural commutation in both step up and step down CCs

b) forced commutation in both step up and step down CCs

c) forced commutation in step up CCs

d) forced commutation in step down CCs

Power transistors are more commonly of -

a) silicon npn type.

b) silicon pnp type.

c) silicon nnp type.

d) silicon npp type.

C is a -

a) Middle level language

b) High level language

c) Low level language

d) None of above

What will be output of program

main ( )

{ int i ;

```
print f ("Enter value of i");
scant ("%d", & i);
if ( i = 5 )
print f ("you entered 5");
else
print f ("you entered %d", i ); }
```
if user entered 100 then

a) 5

b) 100

c) 1005

d) None

(7F)16 + (BA)16 = (?)16-

a) 481

b) 139

c)â€"481

d) â€"139

Twoâ€™s complement of 3 bit nonzero linory number is some or original number is all bits accepts-

a) MSB are zeros

b) LSB are zeros

c) MSB are ones

d) LSB are ones.

The schematic circuits of RTL NOR gate is-

Transistors with high frequency have -

a) Thick base

b) Thin base

c) Some other feature

d) None of the above

Telephone traffic is specified in terms of -

a) Average waiting time

b) Grade of service

c) Peak waiting time

d) Erlangs

In a Hartley oscillator -

a) Necessary phase relation is obtained by connecting grid and plate electrodes to the opposite ends of the tuned circuit.

b) The mutual inductance must have the appropriate polarity.

c) Both grid circuit and plate tuned circuit offer inductive reactance

d) None of the above

The condenser C is charged in a bootstrap sweep generator -

a) Linearly but the discharge is non linear

b) Non linearly but the discharge is linear

c) Linearly and the discharge is linear

d) Non linearly and the discharge is non linear

In an audio amplifier audio signals become garbled and hence difficult to understand when an ac input current is large enough to drive the output to -

a) saturation only

b) Cut off only

c) Either saturation or cut off

d) A value off the load line

Five 1 bit registers are referred as -

a) Flags

b) Slags

c) Tags

d) None of the above

Next binary number after 0,1, 10, 11 is -

a) 12

b) 101

c) 100

d) 110

Identify coincidence logic circuit in the following –

a)   b)

c)   d)

The output analog voltage Vo is given by -

If an inverter is placed at the input to an SR flip flop, the result is -

a) T flip flop

b) D flip flop

c) JK flip flop

d) BCD decade counter

See the Root locus diagram of a system and the following statements :-

1. The open loop system is a second order system.

2. The system is over damped for

3. The system is absolutely stable for all value of R.

Which of these statements are correct?

a) 1, 2, & 3

b) 1 and 3

c) 2 and 3

d) 1 and 2

For the transfer function $G(S)H(S) =$ the phase cross over frequency is -

a) 0.5 rad/sec

b) 0.707 rad/sec

c) 1.732 rad/sec

d) 2 rad/sec

If the open loop transfer function of the system is $G(S) H(S) =$

then a closed loop pole will be located at S = -12 wher the value of K is -

a) 4355

b) 5760

c) 9600

d) 9862

Considering the following open loop transfer function -

The correct sequence of these systems in increasing order of the time taken for the unit step response to settle is –

a) 1, 2, 3

b) 3, 1, 2

c) 2, 3, 1

d) 3, 2, 1.

Considering unit feed back control system in the given figure, the ratio of time constant of closed loop response to open loop response will be -

a) 1: 1

b) 2 :1

c) 3 : 2

d) 2 : 3

Angle subtended by earth at geostationary communication satellite is -

a) 17.340

b) 51.40

c) 1200

d) 600

For data transmission phase modulation is commonly used because -

a) Phase can be varied from +1800 to -1800

b) It is resistant to the effects of noise.

c) Demodulation is very easy

d) It gives highest data rates that can be transmitted over a given channel.

 Several channels are interleaved and then transmitted together is known as –

a)Frequency division multiplex

b) Time division multiplex

c) A group

d) A super group

Identify the wrong statement-

 The radar cross section of a target -

a) Depends on the frequency used

b) May be reduced by special coating of the target

c) Depends on the aspect of a target, if this is non spherical

d) Is equal to the actual cross-sectional area for small targets.

Considering following parameters -

1. Loss in the media) 2. Permeability of the media) 3. Frequency of the wave 4. Velocity of the wave. Which of these parameters are responsible for the change of phase of a propagating electromagnetic wave?

a) 1, 2, and 3

b) 2, 3 and 4

c) 1, 3 and 4

d) 1 and 4

In super heterodyne receivers double spotting is caused by -

a) poor front-end rejection

b) misalignment of receiver

c) detuning of one or more IF stages.

d) non functioning of AGC

The number of lines per field in the United States TV system is -

a) 262 1/2

b) 525

c) 30

d) 60

In a TV receiver the color killer -

a) cuts off the chroma stages during monochrome receivers.

b) ensures that no color is transmitted to monochrome receivers

c) prevents color overloading

d) makes sure that the color burst is not mistaken for sync pulses, by cutting off reception during the back porch.

The nominal capacitance of a coaxial RF cable is of 40 pF/m and the characteristic impedance of 50W. The inductance of the cable is-

a) 1mH/m

b) 10 mH/m

c) 0.1 mH/m

d) 0.01 mH/m

Transmission of wave through Dominant mode is -

a) distortion less transmission

b) generates undesirable harmonic distortion

c) having loss of power

d) None of above.

Lower the standing wave ratio (SWR) -

a) Greater mismatch error

b) Lower mismatch error

c) No effect on matching

d) Moderate mismatch error

In klyrtron oscillator for getting wide range of oscillations resonators should be -

a) Critically coupled

b) Under coupled

c) Over coupled

d) No coupling required

The critical frequency is always -

a) Lower than maximum usable frequency

b) Equal to maximum usable frequency

c) Higher than maximum usable frequency

d) None of above

The PIN diode based on -

a) Nonlinear resistance

b) Nonlinear reactance

c) Negative resistance

d) Controllable impedence

Which antenna having circular polarization -

a) Horn antenna

b) Lens antenna

c) Helical antenna

d) Discone antenna

The i/p S/N ratio of system is 50 and the o/p S/N ratio is 5 the noise figure is -

a) 250

b) 55

c) 10

d) 45

In the 8085 mP, the RST 6 instruction transfers the program execution to the following location -

a) 30 H

b) 24 H

c) 48 H

d) 60 H

In instruction cycle first operation is -

a) Memory read

b) Address read

c) Opcode fetch

d) Data read

CMP instruction comes under group -

a) Data transfer

b) Branching operations

c) Machine control operation

d) Logical operations.

In which logic operation does not effect any flags -

a) ANA B

b) ORA   B

c) XRI   A2H

d) CMA

What happen when CALL instruction executed -

a) Data retrieved from stock to register

b) Data from register saved on the stock.

c) 16 bit address of instruction saved on stock

d) 16 bit address from stock retrieved)

The mark status of mark able interrupts is defined according to content of -

a) stack pointer.

b) HL register .

c) Program counter

d) Accumulator

The decoder is a logic ckt that -

a) Amplifies the current or power at i/p.

b) Identifies each combination of the signals present at i/p

c) Provides appropriate code as o/p for each i/p signal

d) Both b & c)

The young man was quickly promoted when his employers how --------------- he was -

a) indigent

b) indifferent

c) assiduous

d) cursory.

As letter is alphabet so zodiac is -

a) almanac

b) beacon

c) sign

d) signal.

What is the correct meaning of prudish.?

a) careful

b) fast

c) God

d) brave

Pick out the odd matching with reference to number -

a) woman – women.

b) hair   – hairs

c) child   – children.

d) foot   – feet.

Choose the phrase that is most nearly similiar in meaning to the word given below-

Abut is

a) Stimulate

b) Grasp

c) Oppose

d) Adjoin

The highest mountain peak in Indian Territory is -

a) Mount Everest

b) Kanchenjunga

c) Nanda Devi

d) Mount Kailash

German silver is an alloy comprising -

a) Copper, Nickel and Zinc

b) Silver, copper and Zinc

c) Silver Nickel and Zinc

d) Nickel, Zinc and Lead

Mughal Emperor Bahadur Shah Zafar's mausoleum is in -

a) Delhi

b) Lahore

c) Yangon

d) Agra

On which date the World Trade Centre in New York and Pentagon in Washington d)C was attacked by terrorist -

a) 12 September 2001

b) 11 September 2001

c) 11 July 2001

d) 20 December 2001

India defeats South Africa in the finals of the inaugural champions challenge Hockey Tournament in Kualalumpur by -

a) 4-2

b) 2-0

c) 3-2

d) 2-1

Which planets in the solar system are known as 'Inferior Planets' -

a) Earth and Mars

b) Earth and Mercury

c) Mars and Mercury

d) Mercury and Venus.

 The largest Stupa in Southern India is at -

a) Nellore

b) Amravati

c) Tanjore

d) Kozhikode

The new chairman and Managing Director of Industrial Finance Corporaton of India (IFCI) is -

a) Mr. Vishwanath Prasad Singh

b) Mr. Jitendra Patil

c) Mr. Ragh

d) Mr. Shubhash chand Jain

Which one is the latest among rock-cut temples?

a) Ajanta

b) Ellora

c) Elephanta

d) All originated in the same period)

Number of organisations government ban in Jammu and Kashmir and the North East under the new ordinance 'POTO' is -

a) 20

b) 21

c) 22

d) 23

In bed of which river does Badrinath shrine stand?

a) Ganga

b) Mandakini

c) Alakananda

d) Bhagirathi

The nerve endings for the sense of sight are located in the part of the eye called the -

a) Cornea

b) Sclera

c) Iris

d) Retina

Fundamental duties were introduced in the constitution by the -

a) 40th Amendment

b) 42nd Amendment

c) 43rd Amendment

d) 44th Amendment

The Khalsa Panth was founded by -

a) Guru Hargovind

b) Guru Nanak Dev

c) Guru Tegh Bahadur

d) Guru Govind singh

Number of countries involved in international fleet review hosted by India is -

a) 27

b) 28

c) 29

d) 30

BSNL PAPER
1. When a piece of copper and another of germanium are cooled from room temperature to 800 K then the resistance of -
a) Each of them increases
b) Each of them decreases
c) Copper increases and germanium decreases
d) Copper decreases and germanium increases

2. When a signal of 10 mV at 75 MHz is to be measured then which of the following instrument can be used -

a) VTVM
b) Cathode ray oscilloscope
c) Moving iron voltmeter
d) Digital multimeter

3. When a sample of germanium and silicon having same impurity density are kept at room temperature then -
a) Both will have equal value of resistivity
b) Both will have equal value negative resistivity
c) Resistivity of germanium will be higher than that of silicon
d) Resistivity of silicon will be higher than that of germanium

4. When an RC driving point impedance function has zeros at s= -2 and s=-5 then the admissible poles for the function would be
a) s = 0; s = -6
b) s = 0; s = -3
c) s = 0; s = -1
d) s = -3; s = -4

5. For the n-type semiconductor with n = Np and p = n2/ND, the hole concentration will fall below the intrinsic value because some of the holes -
a) drop back to acceptor impurity states
b) drop to donor impurity states
c) Virtually leave the crystal
d) recombine with the electrons

6. The location of lighting arrestor is -
a) Near the transformer
b) Near the circuit breaker
c) Away from the transformer
d) None

7. Time constant of an RC circuit increases if the value of the resistance is -
a) Increased
b) Decreased
c) Neither a nor b
d) Both a and b

8. Telemetering is a method of
a) Counting pulses sent over long distances
b) Transmitting pictures from one place to another
c) Transmitting information concerning a process over a distance
d) None

9. When the gauge factor of a strain gauge is 2, stress is 1050 kg/cm2, Y = 2.1´ 10^6 kg/cm2 and R is 100 ohms then the value of DR will be -
a) 2W
b) 3W
c) 4W
d) 1W

10. As the drain voltage is increased for a junction FET in the pinch off region then the drain current

a) Becomes zero
b) Abruptly decreases
c) Abruptly increases
d) Remains constant

11. One of the following, which is not a transducer in the true sense, is -
a) Thermocouple
b) Piezoelectric pick up
c) Photo-Voltaic cell
d) LCD

12. When a transistor is required to match a 100W signal source with a high impedance output circuit then the connection that would be used is -
a) Common base
b) Common collector
c) Common emitter
d) Emitter follower

13. In a JFET gates are always
a) forward biased
b) reverse biased
c) unbiased
d) none

14. The main factor which differentiate a DE MOSFET from an E only MOSFET is the absence of
a) insulated gate
b) electrons
c) channel
d) P-N junction

15. An SCR conducts appreciable current when
a) Anode and gate are both negative with respect to cathode
b) Anode and gate are both positive with respect to cathode
c) Anode is negative and gate is positive with respect to cathode
d) Gate is negative and anode is positive with respect to cathode

16. Silicon is not suitable for fabrication of light emitting diodes because it is -
a) An indirect band gap semiconductor
b) A direct band gap semiconductor
c) A wide band gap semiconductor
d) A narrow band gap semiconductor

17. An average responding rectifier type electronic ac voltmeter has its scale calibrated in terms of the rms value of a sine wave, when a square wave voltage of peak magnitude 100V is measured using this voltmeter then the reading indicated by the meter, will be
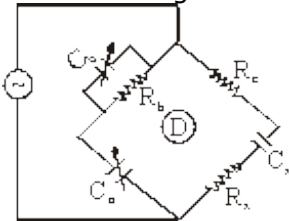**a) 111V**
b) 100V
c) 90.09V
d) 70.7V

18. When a four terminal T network is inserted between a source and load resistance as shown in figure then the resistance seen by the source remain the same with or without the

four terminal block when R is
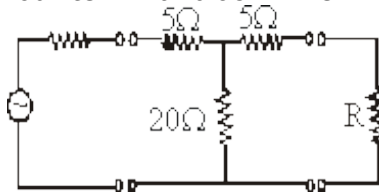
a) 5W
b) 10 W
c) 15 W
d) 20 W

19. In the ac bridge shown in the given figure, the value of Rx and Cx at balance will be
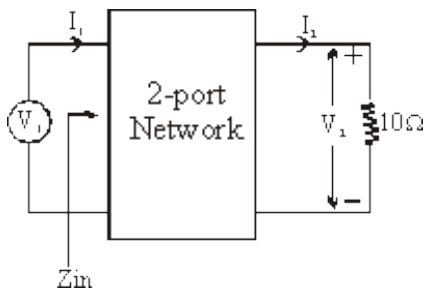

Ans.

$$\text{a. } R_x = \frac{C_b}{C_a}, \quad C_x = \frac{R_b}{R_c} C_a$$

20. Which one of the following conditions for Z parameters would hold for a two port network containing linear bilateral passive circuit elements -
a) Z11 = Z22
b) Z12Z21 = Z11Z22
c) Z11Z12 = Z22Z21
d) Z12 = Z21

21. When the transmission parameters of the following network are A = C = 1, B = 2 and D = 3 then the value of Zin is -

Ans.

a. $\dfrac{12}{13}\ \Omega$

22. The value of G12 or v2/v1 for the circuit shown in the fig. is -
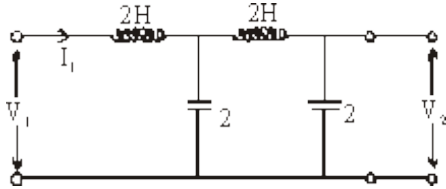
Ans.

d. $\dfrac{1}{16s^4 + 12s^2 + 1}$

23. The two port network of the fig. shown has open circuit impedance parameters given by matrix -
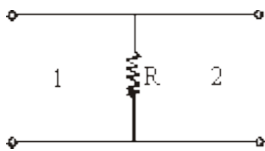
Ans.

a. $\begin{bmatrix} R & R \\ R & R \end{bmatrix}$

24. In the circuit shown, the switch closes at t = 0. The voltage across 4mF capacitor in ideal condition changes to -
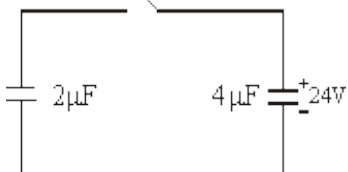
a) 0
b) 16V
c) 15V
d) 24V

25. While calculating Rth, constant current sources in the circuit are -
a) replaced by opens
b) replaced by 'shorts'

c) treated in parallel with other voltage sources
d) converted into equivalent voltage sources

26. Maxwell's loop current method of solving electrical networks
a) uses branch currents
b) utilizes kirchhoff's voltage law
c) is confined to single-loop circuits
d) is a network reduction method

27. A transmission line of characteristic impedance Z0 = 50 ohms, phase velocity Vp = 2 x 10^8 m/s and length l = 1m is terminated by a load ZL= (30 - j 40) ohms. The input impedance of the line for a frequency of 100 MHz will be
a)(30 + j40) ohms
b)(30 - j40) ohms
c)(50 + j40) ohms
d)(50 - j40) ohms

28. For an elliptically polarized wave incident on the interface of a dielectric at the Brewster angle then the reflected wave will be
a) Elliptically polarized
b) Linearly polarized
c) Right circularly polarized
d) Left circularly polarized

29. A yagi antenna has a driven antenna-
a) Only
b) With a reflector
c) With one or more directors
d) With a reflector and one or more directors

30. The number of lobes on each side of a 3l resonant antenna is -
a) 3   **b) 6**   c) 2   d) 1

31. The electric field intensity of a Hertizian dipole at a remote point varies as
Ans. 1/r

32. Radiation resistance of a half wave folded dipole is
a) 72 W   b) 144W   **c) 288 W**   d) 216W

33. When a carrier wave is modulated at 100% it's power is increased by -
a)100%   b)150 %   **c)50%**   d)0%

34. On a clear sky day, the atmospheric radio noise is strongest -
a) During morning hours
b) Around mid-day
c) During nights
d) In the afternoon

35. TV broadcasting system in India is as per CCIR -
a) System B
b) System I
c) System M
d) System X

36. For the safety measurement of the internal resistance of a 25-0-25 mA meter, a laboratory multimeter whose sensitivity is equal to -
a) 1k ohm/volt   can be used
b) 10 k ohm/volt   can be used
c) 100 k ohm/volt can be used
d) 200 k ohm/volt can be used

37. In order to measure moisture in wood the most suitable method is -
a) Electrical conduction
b) Electrical - capacitive
c) Absorption of radiation
d) Equilirium- moisture vs humidity

38. The flow rate of elctrically conducting liquid without any suspended practicle cannot be measured by
a) turbine flow meters
b) electromagnetic flow meters
c) ultrasonic flow meters
d) thermistor based heat loss flow meters

39. The most useful transducer for displacement sensing with excellent sensitivity, linearity and resolution is
a) an incremental encoder
b) an abosolute encoder
c) LVDT
d) a strain gauge

40. When variable reluctance type techometer has 150 teeth on the rotor & the counter records 13,500 pulses per second then the rotational speed will be-
a) 4800 rpm   **b) 5400 rpm**   c) 6000 rpm   d) 7200 rpm.

41. On a voltage scale, zero dB m in a 600-ohm system could refer to
a) 1.732 V   **b) 1.0 V**   c) 0.7746 V   d) 0.5V

42. One of the following devices which is required in addition in order to measure pressure using LVDT is
a) strain gauge   b) pitot tube   **c) Bourden tube**   d) Rotameter

43. It is required to measure temperature in the range of 1300 deg C to 1500 deg C The most suitable thermocouple to be used as a transducer would be
a) chromel - constantan
b) Iron - constantan
c) chromel - alumel
d) platinum- rhodium

44. In a CSI if frequency of output voltage is f Hz, then frequency of input voltage to CSI is
a) f
b) 2 f
c) f/2
d) 3 f

45. Identify the type of chipper in the given circuit
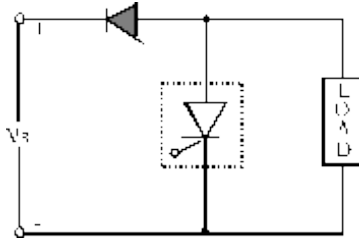
a) Type A chopper
b) Type B chopper
c) Type C chopper
d) Type D chopper

46. Maximum value of charging resistance in an UJT is associated with-
a) peak point
b) valley point
c) any point between peak and valley
d) after the valley point

47. Thyristor A has rated gate current of 2A and thyristor B a rated gate current of 100 mA
a) A is a GTO and B is a conventional SCR
b) B is a GTO and A is a conventional SCR
c) B may operate as a transistor
d) none of the above

48. In a 3 phase full converter, the output voltage during overlap is equal to-
a) zero
b) source voltage
c) source voltage minus the inductance drop
d) average value of the conducting phase voltages

49. Mark old the correct statement for Cycloconverters
a) step-down Cycloconverter (CC) works on natural commutation
b) step up CC requires no forced commutation
c) load commutated CC works on line commutation
d) none of the above

50. In a 3 phase full converter if load current is I and ripple free, then average thyristor current is
Ans. **b) 1/3(I)**

51. In the RF amplifier stage cascade (CE-CB) amplifier is used because it gives
a) Large voltage gain
b) Low output impedance
c) Large isolation between the input and the output
d) None of the above

52. Silicon diode is less suited for low voltage rectifier operation because-
a) it can withstand high temperature
b) ensures low PIV of the diodes
c) ensures lower values of capacitance in the filter
d) reduces ripple content

53. An amplifier of class A is that in which
a) Base is biased to cut-off
b) Ic flows most of the time
c) Ie flows all the time
d) Vc often raises to Vcc

54. A transistor is in active region when-
a) Ib = bIc   **b) Ic=bIb**   c) Ic=Ie   d) Ic=Ib

55. For coupling purposes in RF amplifier a buffer amplifier is used because it provides
a) Maximum loading and minimum mismatch
b) Minimum loading and minimum mismatch
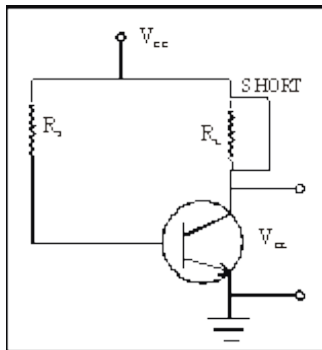c) Maximum loading and maximum mismatch
d) Minimum loading and maximum mismatch

56. A transistor has CE parameter as hie = 10kW, hre =20 x 10-4 , hse = 100, hoe = 25 ms. The hib for this transistor will be-
a) 100 W   **b) 99.01 W**   c) 5m W   d) 101kW

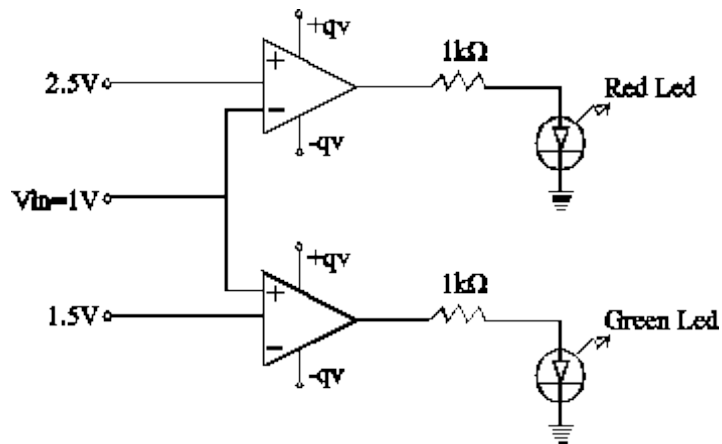57. An FM radio receiver is tuned to a 90.6 MHz broadcast station. It will receive an image frequency of
a) 110 MHz   **b) 112 Hz**   c) 114 MHz   d) 120 MHz

58. In the given fig RL is shorted out, then VCE will become-

a) OV
b) VCC - IBRB
c) Equal to VCC
d) None of the above

59. See the circuit shown and choose the correct option

**a) Only red will glow**
b) Only green will glow
c) Both red and green will glow
d) Neither red nor green will glow

60. A dc to dc converter having an efficiency of 80% is delivering 16W to a load) If the converter is generating an output of 200V from an input source of 20V, then the current drawn from the source will be
a) 0.1A   b) 0.5A   **c) 1.0A**   d) 10.0A

61. A transistor is operated as a non-saturated switch to eliminate -
a) storage time
b) turn - off time
c) turn - on time
d) delay time

62. The output Y of the circuit in the given figure is -
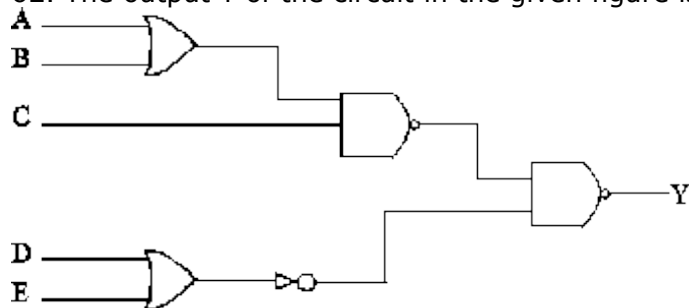
a) (A + B)C + DE
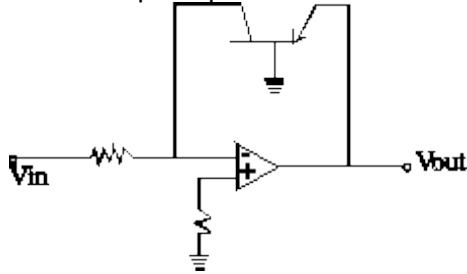b) AB + C(D + E)
c) (A + B)C + D + E
d) (AB + C) . DE

63. Rotors used in a two-phase ac servomotor is
a) solid iron motor
b) squirrel cage rotor
c) drag cup rotor
d) both b and c
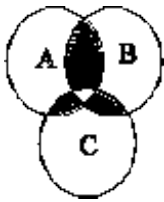
64. Major advantage of TWT over a klystron lies in its
a) higher bandwidth
b) higher output
c) higher frequency
d) higher gain

65. The op-map circuit shown in the given figure can be used for

a) addition
b) subtraction
c) both addition and subtraction
d) multiplication

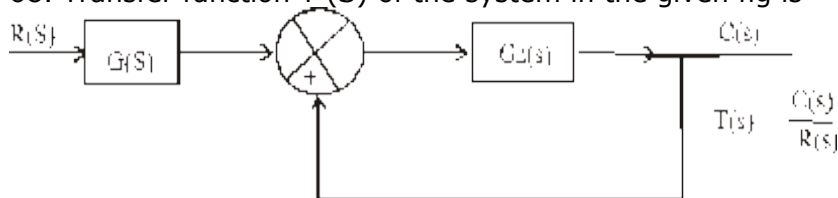66. The Boolean expression for the shaded area in the given Venn diagram is

Ans. AB+BC+CA

67. A lag compensator is basically a
a) high pass filter
b) band pass filter
c) low pass filter
d) band elimination filter

68. Transfer function T (S) of the system in the given fig is-

Ans.

a. $T(s) = \dfrac{G_1(s)G_2(s)}{1 - G_2(s)}$

69. The overall transfer function for a unity feedback system is $4/(S^2+4S+4)$
Mark the correct statement regarding this system
1. Position error constant kp for the system is 4
2. The system type one.
3. The velocity error constant kv for the system is finite.
Select the correct answer using the codes given below Codes
a) 1,2 and 3   b) 1 and 2   c) 2 and 3   **d) 1 and 3**

70. If the rotor's resistance and reactance are respectively R and X1 its length and diameter
are L and D for two phase a) c) servomotor, then
Ans. X/R is small but L/D is large

71. In a PID controlles the transfer function G(s) is
Ans. K(1+(1/Tis)+Tds)

72. Transfer function 600/S(S+1)(S+15)(S+20) can be approximated by the system
Ans. 2/S(S+1)

73. The transfer function of an amplifier is given by

$$Av = \frac{V\,o}{V\,s} = \frac{2810}{\left(1 + J\dfrac{f}{585 \times 10^5}\right)\left(1 + j\dfrac{f}{585 \times 10^6}\right)}$$
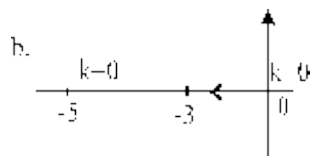
The high 3 db frequency of an amplifier will be approximately-
a) 5850 kHz   b) 585 kHz   c) 5850 Hz   d) 585 Hz

74. An open loop transfer function is given by
K(S+3)/S(S+5) Its - loci will be
Ans.

b.

75. The output signals amplitudes for 1's and 0's in an ADM transmission systems are
a) Fixed and the repetition rate is also fixed
b) Fixed but the repetition rate is variable
c) Variable and the repetition rate is also variable
d) Variable but the repetition rate is fixed

76. Microwave link repeaters are typically 50km apart
a) Because of atmospheric attenuation
b) Because of Output tube power limitations
c) Because of the earth's curvature
d) To ensure that the applied ac voltage is not excessive

77. The amplifier inserted at intervals to amplify the signal and compensate for transmission
loss on the cable are called
a) line amplifier

b) equalizing amplifiers
c) compradors
d) repeaters

78. Diversity reception in used to
a) increase receiver sensitivity
b) improve receiver selectivity
c) overcome degrading effect of fading
d) overcome degrading effect of receiver detuning

79. Mark out transferred electron device in the following-
a) BARITT dived
b) IMPATT dived
c) Gunn divde
d) Step recovery diode

80. In the output of a normal monochrome receiver video detector voltages, which are not found, are
a) syne   b) video   **c) sweep**   d) sound

81. The HV anode supply for the picture tube of TV receiver is generated in the
a) mains transformer
b) vertical output stage
c) horizontal output stage
d) horizontal deflection oscillator

82. In antenna measurements using two aperture antennas of dimensions D_1 and D_2, minimum separation between the two should be (x is free space wavelength of radiation uses)
Ans. $(D_1^2+D_2^2)/x$

83. The frquency range for satellite broad casting is
a) 30 MHz - 300MHz
b) 30 MHz - 3 GHz
c) 3 GHz - 30 GHz
d) 30 GHz - 300 GHz

84. Iris is used to
a) Over come power loss
b) Over come bending effect
c) Over come mismatch error
d) Over come twist effect

85. In schotty barrier diode current flows because of
a) Majority carriers
b) Minority carriers
c) Majority and minority carriers
d) None

86. Which antennas are used in microwave communication
a) long wave antennas
b) Rhombic antennas
c) Parabolaidal antennas

d) All of above

87. Among translator & time of sight system capacity
a) Of translator is more
b) Of line of sight is more
c) Having equal capacity
d) No relation such as

88. No of T-state required for memory read or write operation-
a) 2   **b) 3**   c) 4   d) 6

89. In data transfer operation which flag get affected)-
a) 3140 flog   b) carry flog   c) sign flog   **d) none**

90. In flowchart which figure represents process like subroutine-
Ans.

_____
| |_____| |

91. The storage and retrieval of data on stacks should follow sequence-
a) last in first out
b) first in first out
c) random in random out
d) none

92. While executing program microprocessor checks INTR line clearing
a) each instruction
b) after interval of two instruction
c) after a subroutine
d) at the end of program

93. In which error check technique of data communication 2's complement of all bytes of data is transmitted with data
a) Even parity
b) odd parity
c) check scans
d) cyclic redundancy

94. Program execution hierarchy decides which operator
a) is most important
b) is used first
c) is fastest
d) operators on largest number

95. (375)base10 = (?)base8
a) 550   b) 557   **c) 567**   d) 577

96. To obtain 2048x8 memory using 128x8 memory chip how many IC required-
a) 2   b) 4   c) 8   **d) 16**

97. A Decimal no. 17 can be converted in binary, the binary no. will be.
a) 10001   b) 01110   c)00111   d) 11100

98. Is the Universal logic gate
a) AND   b) OR   **c) NAND**   d) X-OR

99. A monostable state in multivibrator means
a) which returns itself to its single stable state
b) the state used only once in circuit
c) the state of circuit can not get changed
d) the state of circuit always changing

100. For designing binary counter which flip flop is preferred
a) T FF   b) SR FF   **c) D FF**   d) JK FF

101. His handwriting was not ----- so I could not read his note
a) attractive   b) eligible   c) clear   **d) legible**

102. They started to ----- people into the theatre only at six -
a) enter   **b) admit**   c) follow   d) accept

103. I told him to buy things that are lasting (Give the appropriate synonym of the underlined word).
a) ending   b) ordinary   **c) durable**   d) cheap

104. Give the word which is most opposite in meaning of the word 'evident'-
a) doubtful   b) unimportant   c) disagreed   d) understood

105. I expressed by disagreement ------ him on that issue
a) between   **b) with**   c) about   d) for

106. 'Sugarbowl' of the world is
a) India   **b) Cuba**   c) Brazil   d) USA

107. Palk strait separates
a) India and Srilanka
b) India and Burma
c) Britain and France
d) Malaysia and Sumatra

108. The minimum number of atoms in a molecule of an element are-
a) 1   b) 5   c) 2   d) 10

109. Tides in the sea are caused by
a) Effect of sun
b) Effect of moon
c) combined effect of moon and sun
d) Gravitational, centrifugal and centripetal forces

110. The Bar council of India decided to close over law colleges across the country for their failure to maintain minimum teaching standard) There number is
a) 140   b) 200   **c) 150**   d) 100

111. Aswan Dam is located in
a) Egypt   b) Libya   c) Sudan   d) Iran

112. Ghana Birds sanctuary is in the state of
a) Rajasthan   b) Madhya Pradesh   c)Uttar Pradesh   d) Maharashtra

113. Dry ice is
a) Frozen carbon monoxide
b) Frozen carbon dioxide
c) Frozen ammonia
d) None of these

114. East flower river of India is
a) Cauvery   b) sone   c) Narmada   d) Tapti

115. The total length of the great wall of China is -
a) 1,400 miles   b) 1,500 miles   c) 1,300 miles   d) 1,400 miles

116. Deficiency of vitamin C may result in
a) beriberi   b) night blindness   c) dermatitis   **d) Scurvy**

117. Bharat Shah a film financer was granted bail by Supreme Court after a period of
a) 11 months   b) 2 years   c) 18 months   **d) 15 months**

118. Indian local time is based on
a) 800 E longitude
b) 82 1/2E longitude
c) 1100 E longitude
d) 250 E longitude

119. The two days Shiv Shena Mahashivir of 2002 started at Shirdi on
a) 9th April 2002   b) 10th April 2002   c) 8th April 2002   d) 11th April 2002

120. Which one is a good preservative of food?
a) Spirit   **b) Formaldehyde**   c) Sugar   d) None of the above