## BSNL Junior Telecom Officers-JTO 2005 Paper

## Section - I : Technical

We have marked each question with a unique notation to understand its weightage of subject.

## PE1 : Power Electronics

MI1 : Measurement Instrumentations
CS1 : Communication System
EMT1 : Electromagnetic Theory
MW1 : Microwave Engineering
EDC1 : Electronics Devices
AE1 : Analog Electronics
NT1 : Network theory
CT1 : Control System
MS1: Material Science
MP1: Microprocessor
DE1: Digital Electronics
CE1: Computer Engineering

## PE1

(1.) Class C amplifier is mainly used
(a) as an RF amplifier
(b) as stereo amplifier
(c) in communication sound equipment
(d) as distortion generator PE1
(2.) A single-phase voltage source squarewave inverter feeds pure inductive load. The waveform of the load current will be
(a) Sinusoidal
(b) Rectangular
(c) Trapezoidal
(d) Triangular

PE1
(3.) When a series LC circuit is connected to a dc supply of V volt through a thyristor, then the peak current through thyristor is
(a) $V \sqrt{\left(\frac{C}{L}\right)}$
(b) $V \sqrt{\left(\frac{L}{C}\right)}$
(c) $V \sqrt{L C}$
(d) $V / \sqrt{L C}$

PE1
(4.) In synchronized UJT triggering of an SCR, voltage $\mathrm{V}_{0}$ across capacitor reaches UJT threshold 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
(a) Once in each half cycle
(b) Thrice in each half cycle
(c) Twice in each half cycle
(d) Four times in each half cycle PE1
(5.) In dc choppers for chopping period T, the output voltage can be controlled by FM by varying
(a) T keeping $\mathrm{T}_{\mathrm{ON}}$ constant
(b) $\mathrm{T}_{\text {off }}$ keeping T constant
(c) T keeping $\mathrm{T}_{\text {off }}$ constant
(d) None of these

## PE1

(6.) A thyristor is in the forward blocking state. Then
(a) All the 3 junctions are reverse biased
(b) The anode and cathode junctions are forward biased but the gate junctions is reverse biased
(c) The anode junction is forward biased but the other two, cathode and gate junctions are reverse biased
(d) The anode and gate junctions are forward biased but the cathode junctions is reverse biased PE1
(7.) A 3 phase semi converter can work as
(a) Converter for $\mathrm{a}=00$ to 1800
(b) Converter for $\mathrm{a}=00$ to 900
(c) Inverter for $\mathrm{a}=900$ to 1800
(d) Inverter for $\mathrm{a}=00$ to 900

PE1
(8.) A single-phase full bridge inverter can operate in load-commutation mode in case load consists of
(a) RLC overdamped
(b) RLC underdamped
(c) RLC critically damped
(d) None of these PE1
(9.) In a thyristor, ratio of latching current to holding current is
(a) 0.4
(b) 1.0
(c) 2.5
(d) 6.0

MI1
(10.) A 300 V full-scale deflection voltmeter has an accuracy of $\pm 2 \%$. When it reads 222 V , the actual voltage
(a) Lies between 217.56 V and 226.44 V
(b) Lies between 217.4 V and 226.6 V
(c) Lies between 216 V and 228 V
(d) Is exactly 222 V

MI1
(11.) Which of the following types of transducers can be used for measurement of an angular position?
(a) Circular potentiometer
(b) Synchro
(c) E-pick off
(d) Both (a) and (b)

MI1
(12.) The temperature coefficient of resistance for a thermistor is
(a) Low and negative
(b) Low and positive
(c) High and negative
(d) High and positive

MI1
(13.) The dynamic characteristics of capacitive transducers are similar to those of a
(a) Low pass filter
(b) High pass filter
(c) Notch filter
(d) Band stop filter

MI1
(14.) A 0 to 200 V de moving coil voltmeter has a guaranteed accuracy of $0.75 \%$ of full scale reading. The voltage measured by instrument is 100 V . The limiting error is
(a) $3 \%$
(b) $2 \%$
(c) $1.5 \%$
(d) $0.75 \%$

MI1
(15.) A digital frequency counter can be converted to a DVM by addition of a stage of suitable
(a) Voltage controlled oscillator
(b) $\mathrm{D} / \mathrm{A}$ converter to it
(c) Power amplifier to it
(d) Operational amplifier to it MI
(16.) A dry cell is a
(a) Time variant only
(b) Active device only
(c) Time-varying and active device
(d) None of these MI1
(17.) $Q$ is
(a) Directly proportional to damping factor
(b) Inversely proportional to damping factor
(c) Directly proportional to the square of damping factor
(d) Directly proportional to the cube of damping factor CS1
(18.) The signal to quantization noise ratio in a PCM system depends upon
(a) Sampling rate
(b) Number of quantization levels
(c) Massage signal band width
(d) Size of the transmission system EMT1
(19.) In any transmitting antenna system, efficiency primarily depends upon
(a) Ohmic losses of various conductors
(b) Radiation resistance
(c) Ground conductivity
(d) Atmospheric conditions

## EMT1

(20.) When the power of transmitter is doubled, then the field strength at a point will go up by
(a) 2 dB
(b) 6 dB
(c) 3 dB
(d) None of these

CS1
(21.) In a FM receiver, the channel bandwidth is around
(a) 10 KHz
(b) 20 KHz
(c) 75 KHz
(d) 200 KHz

EMT1
(22.) The power carried by an electromagnetic wave traveling in free space changes with distance ' $d$ ' in proportion to
(a) d
(b) $1 / \mathrm{d}$
(c) $1 / \mathrm{d}^{2}$
(d) $\mathrm{d}^{2}$

MW1
(23.) One of the following which is not a wide band antenna is
(a) Marconi
(b) Helical
(c) Rhombic
(d) Folded dipole MW1
(24.) Out of the following the one that mostly reflects the high frequency radio waves is
(a) D
(b) E
(c) F1
(d) F2

EMT1
(25.) Evanescent mode attenuation in a waveguide depends upon the
(a) 32 GHz
(b) 8 GHz
(c) $4 \sqrt{3} \mathrm{GHz}$
(d) $8 \sqrt{5} \mathrm{GHz}$

EMT1
(26.) 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
(a) 80
(b) 164
(c) 36
(d) 56

CS1
(27.) The channel required for EM telemetry is
(a) The same as that required for AM telemetry
(b) Smaller than the required for AM telemetry
(c) 100 times that required for AM telemetry
(d) 10 times that required for AM telemetry MW1
(28.) The crossed dipoles in turnstile antenna are excited with voltage such that the phase shift between the voltage is
(a) Zero
(b) $45^{\circ}$
(c) $90^{\circ}$
(d) $180^{\circ}$

MW1
(29.) The antenna most commonly used for TV broadcasting in the UHF is
(a) Turnstile antenna
(b) Dipole antenna
(c) Yagi antenna
(d) Rhombic antenna EMT1
(30.) The dominant mode in a waveguide is characterized by
(a) Longest cut off wavelength
(b) Shortest cut off wavelength
(c) Infinite attenuation
(d) Zero attenuation NT1
(31.) When two identical $3 \mathrm{~V}, 1 \mathrm{~W}$ batteries are connected in parallel with like polarity, then the Norton equivalent circuit of this combination is
(a) $3 \mathrm{~A}, 0.5 \mathrm{~W}$
(b) $6 \mathrm{~A}, 1 \mathrm{~W}$
(c) $3 \mathrm{~A}, 1 \mathrm{~W}$
(d) $6 \mathrm{~A}, 0.5 \mathrm{~W}$

NT1
(32.) For the network shown in Figure (a) and (b) to be duals, it is necessary that $R^{\prime}, L^{\prime}$ and $C^{\prime}$ are respectively equal to

figure (a)

figure (b)
(a) $\frac{1}{\mathrm{R}}, \mathrm{C}$ and L
(b) $\frac{1}{\mathrm{R}}, \frac{1}{\mathrm{~L}}$ and $\frac{1}{\mathrm{C}}$
(c) $\mathrm{R}, \frac{1}{\mathrm{~L}}$ and C
(d) R, L and C

NT1
(33.) In the circuit shown below, the value of I will be

(a) 1 A
(b) 2 A
(c) 4 A
(d) 8 A

NT1
(34.) The network shown in the figure represents a

(a) Band-pass filter
(b) Low-pass filter
(c) High-pass filter
(d) Band-stop filter

NT1
(35.) One of the following theorem which is the manifestation of the law of conservation of energy is
(a) Tellegen's theorem
(b) Reciprocity theorem
(c) Thevenin's theorem
(d) Norton's theorem

EDC1
(36.) The modulation of effective base width by collector voltage is known as early effect, hence reverse collector voltage,
(a) Increases both alpha and beta
(b) Decreases both alpha and beta
(c) Decreases alpha but increases beta
(d) Decreases beta but increase alpha EDC1
(37.) The gain-band width product of a junction transistor is affected to a maximum extent by
(a) Base collector parasitic capacitance
(b) Base collector space charge layer capacitance
(c) Base collector space charge layer capacitance
(d) Base emitter diffusion capacitance EDC1
(38.) One of the following statements which is correct regarding the two transistor model of the p-n-p-n four layer device is
(a) It explains only the turn ON portion of the deice characteristic
(b) It explains only the turn OFF portion of the device characteristics
(c) It explains only the negative region promotion of the device characteristics
(d) It explains all the regions of the device characteristics MS1
(39.) The resistance of the metallic wire would
(a) Increase as the operating frequency increases
(b) Decreases as the operating frequency increases
(c) Remain unaffected on increasing the operating frequency
(d) None of these EDC1
(40.) The threshold voltage of a MOSFET can be lowered by
(a) Using a thinner gate oxide
(b) Increasing the substrate concentration
(c) Both (a) and (b)
(d) None of these MI1
(41.) 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

EDC1
(42.) In order to convert intrinsic
semiconductors into extrinsic ones, the level of doping required is about
(a) $1: 10^{3}$
(b) $1: 1$
(c) $1: 10^{8}$
(d) $1: 10^{5}$

MI1
(43.) The input impedance of a CRO is nearly
(a) Zero
(b) Around 10 ohms
(c) Around 100 ohms
(d) Around one mega ohm MS1
(44.) One of the following material which has negative temperature coefficient of resistance is
(a) Brass
(b) Copper
(c) Aluminium
(d) Carbon

NT1
(45.) The series equivalent resistance value in case of a lossy capacitor will be
(a) Very small
(b) Small
(c) Large
(d) None of these MI1
(46.) In a cable the voltage stress is maximum at the surface of the
(a) Sheath
(b) Conductor
(c) Insulator
(d) None of these

## EMT1

(47.) In electrical machines, laminated cores are used with a view to reduce
(a) Hysteresis loss
(b) Eddy current loss
(c) Magnetic loss
(d) None of these

EDC1
(48.) In a semiconductor the measurement of Hall coefficient provides information on the
(a) Sign and mass of charge carriers
(b) Mass and concentration of charge carriers
(c) Sign of charge carries alone
(d) Sign and concentration of charge carriers

MS1
(49.) The main purpose of plating the high frequency inductors and capacitors with silver is to
(a) Reduce their dc resistances
(b) Reduce their ac resistances
(c) Increase their ac resistance
(d) Increases their dc resistance

EDC1
(50.) For an abrupt junction varactor diode, the dependence of device capacitance
(c) on applied reverse bias (V) is given by
(a) $\mathrm{C} \propto \mathrm{V}^{1 / 3}$
(b) $\mathrm{C} \propto \mathrm{V}^{-1 / 3}$
(c) $\mathrm{C} \propto \mathrm{V}^{1 / 2}$
(d) $\mathrm{C} \propto \mathrm{V}^{-1 / 2}$

CE1
(51.) For address modification purpose computer uses
(a) Temp register
(b) Index register
(c) Stack pointer
(d) Program counter

MP1
(52.) A pointer which points the memory address of the current or next instruction is
(a) Index register
(b) Temp register
(c) Program counter
(d) Stack pointer

DE1
(53.) Partly random and partly cyclic sequential access of memory is in
(a) Magnetic tape
(b) CD ROM
(c) Magnetic Drum
(d) Floppy

DE1
(54.) For designing half adder, we require
(a) A NOT gate and a OR gate
(b) A AND gate and a OR gate
(c) Two AND gate
(d) A AND gate and a X-OR gate DE1
(55.) If JK inputs are tied together, the circuit reduces to
(a) SR FF
(b) D FF
(c) T FF
(d) JK FF

DE1
(56.) In active low logic, the logic 1 state corresponds to
(a) High voltage level
(b) Low voltage level
(c) Negative voltage
(d) Ground level

## DE1

(57.) To obtain $16 \times 8$ memory using $16 \times 4$ memory. How many IC are required?
(a) 16
(b) 2
(c) 4
(d) 8

CE1
(58.) In C programming character variable at a time holds
(a) 1 byte
(b) 8 byte
(c) 16 byte
(d) 256 byte

## CE1

(59.) How many type of control statements in C?
(a) 2
(b) 3
(c) 4
(d) 6

MP1
(60.) Is a non-maskable interrupt
(a) RST 7.5
(b) RST 6.5
(c) RST 5.5
(d) TRAP

MW1
(61.) Negative resistance characteristics for its operation is used by
(a) TWT
(b) Klystron
(c) Magnetron
(d) MASERS

PE1
(62.) Which power amplifiers has maximum efficiency?
(a) Class A
(b) Class AB
(c) Class B
(d) Class C

## CS1

(63.) A telephone channel has bandwidth $B$ of 3 KHz and SNR of 30 dB . It is connected to a Teletype machine having 32 different symbols. The symbols rate required for errorless transmission is nearly
(a) $1800 \mathrm{symbols} / \mathrm{s}$
(b) 3000 symbols/s
(c) 5000 symbols/s
(d) 6000 symbols/s

## CS1

(64.) The frequency deviation in phase modulation is
(a) Independent of the modulating signal frequency
(b) Inversely proportional to the modulating signal frequency
(c) Directly proportional to the modulating signal frequency
(d) Inversely proportional to the square root of the modulating frequency

PE1
(65.) Mark out a wrong statement for two phase servo motor
(a) The rotor diameter is small
(b) The rotor resistance is low
(c) The applied voltages are seldom balanced
(d) The torque speed characteristic is linear

## CS1

(66.) Hamming codes are used for error detection and correction. If the minimum Hamming distance is $M$, then the number of errors correctable is
(a) Equal to M
(b) Less than $M / 2$
(c) Equal to 2 M
(d) Greater than M

DE1
(67.) If the input and output signals of a block box are as given in the following figures, then the black box is a/an

(a) Coincidence circuit
(b) EX OR circuit
(c) JK Flip Flop
(d) R-S Flip Flop

MW1
(68.) The amplification in parametric amplifiers used in microwave communication system is limited by
(a) Type of biasing
(b) Cassegrain antenna
(c) Pyramidal horn antenna
(d) Dipole antenna

MW1
(69.) The best scanning system for tracking if the target has been acquired is
(a) Lobe switching
(b) Sequential lobbing
(c) Conical scanning
(d) Monopulse

CS1
(70.) Identify the wrong statement : Modulation is used to
(a) Reduce the bandwidth used
(b) Separate differing transmissions
(c) Ensure that intelligence may be transmitted over long distances
(d) Allow the use of practicable antennas

CT1
(71.) The number of forward paths and individual loops in the signal flow diagram given below are

(a) 3, 7
(b) 4,7
(c) 5,6
(d) 5,7

AE1
(72.) In a three phase half-wave rectifier, the peak inverse voltage will be
(a) $\sqrt{6} \mathrm{E}$
(b) $\sqrt{3} \mathrm{E}$
(c) 2 E
(d) $\sqrt{3 / 2} \mathrm{E}$

CT1
(73.) In the formation of Routh's array the situation of a row of zeros indicates that the system
(a) has symmetrically located roots
(b) is not sensitive to variations in gain
(c) is stable
(d) unstable

CT1
(74.) 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:
(a) 3 and 4
(b) 1 and 2
(c) 1,2 and 3
(d) 1, 2, 3 and 4

CT1
(75.) Mark the features of the break away point in the root locus of a closed loop control system with the characteristic equation $1+K G_{1}(s) H_{1}(s)=0$

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 $\frac{d k}{d s}=0$

Select the correct answer using codes below:
(a) 1, 2 and 3
(b) 1 and 2
(c) 2 and 3
(d) 1 and 3

CT1
(76.) 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
(a) $\mathrm{K}>20$
(b) $15<\mathrm{K}<19$
(c) $8<\mathrm{K}<14$
(d) $\mathrm{K}<6$

NT1
(77.) A composite voltage $V=10 \sin 100 t+10 \cos 100 t$ is applied across a series combination of a capacitor of 1 F and a resistance of 10 k . The average power dissipated in the resistance is
(a) 5 mW
(b) 3.5 mW
(c) 4 mW
(d) 8 mW

CS1
(78.) The output signal amplitudes for 1's and 0's in an ADM transmission system
(a) Fixed and the repetition rate is also fixed
(b) Fixed but the repletion rate is variable
(c) Variable and the repetition rate is also variable
(d) Variable but the repetition are fixed MP1
(79.) The interface chip used for data transmission between 8086 and a 16-bit ADC is
(a) 8529
(b) 8251
(c) 8255
(d) 8253

DE1
(80.) The circuit shown in the figure given below equivalent to

(a)

(b)

(c)

(d)


AE1
(81.) The reverse saturation current $\mathrm{I}_{\mathrm{CO}}$ in a transistor amplifier
(a) Doubles for every 100C rise in temperature
(b) Doubles for every 50C rise in temperature
(c) Doubles for every 10C rise in temperature
(d) Increases linearly with temperature

DE1
(82.) Mark out stop in the following
(a) $\mathrm{AB}+\overline{\mathrm{A}} \mathrm{C}+\mathrm{BC}$
(b) $(\mathrm{A}+\mathrm{B})(\mathrm{A}+\mathrm{C})(\mathrm{B}+\overline{\mathrm{C}})$
(c) $\mathrm{AB}+(\overline{\mathrm{B}}+\mathrm{C})$
(d) $\overline{\mathrm{A}} \mathrm{C}+\mathrm{BC}+(\mathrm{A}+\mathrm{C})$

## CS1

(83.) In a PCM system, the number of quantization levels are 16 and the maximum signal frequency is 4 KHz . The bit transmission rate is
(a) $64 \mathrm{~K} \mathrm{bits} / \mathrm{sec}$
(b) $32 \mathrm{~K} \mathrm{bits} / \mathrm{sec}$
(c) $32 \mathrm{~K} \mathrm{bits} / \mathrm{sec}$
(d) $16 \mathrm{~K} \mathrm{bits} / \mathrm{sec}$ DE1
(84.) For a six bit ladder D/A converter which has digital input of 101001, the analog value is (assume $0=0 \mathrm{~V}$ and $1=+10 \mathrm{~V}$ )
(a) 0.423
(b) 0.552
(c) 0.641
(d) 0.923
DE1
(85.) Main memory are of two kinds
(a) ROM and RAM
(b) Random and sequential
(c) Primary and secondary
(d) Central and peripheral CS1
(86.) In FM if transmission bandwidth is doubled, then the SNR is
(a) Also doubled
(b) Improved fourfold
(c) Decreased by one fourth
(d) Unaffected

DE1
(87.) The binary equivalent of 9.37510 is
(a) 1001.0112
(b) 1101.1012
(c) 1100.0112
(d) 1111.0012

DE1
(88.) Identity wrong rule for binary subtraction?
(a) $0-0=0$
(b) $1-0=1$
(c) $1-1=0$
(d) $0-1=-1$ with borrow of 1

DE1
(89.) When a large number of analog signals is to be converted to digital form, an analog multiplexer is used. The A to D converter suitable in this case will be
(a) Dual slope type
(b) Up down counter type
(c) Successive approximate type
(d) Forward counter type DE1
(90.) TTL circuits are used in main frame computers because of their
(a) Fast operating speed
(b) Slow operating speed
(c) Medium operating speed
(d) None of the above DE1
(91.) The process of conversion from an analog signal to digital signal is known as an
(a) Analog to digital conversion
(b) Digital to analog conversion
(c) Analog to analog conversion
(d) Digital to digital conversion EDC1
(92.) Identify the false statement about MOSFET. It can deplete in
(a) Depletion mode
(b) Enhancement modes
(c) Depletion and enhancement modes
(d) Depletion only mode CS1
(93.) For signal amplitude modulated to a depth of $100 \%$ by a sinusoidal signal power is
(a) Same as the power of unmodulated carrier
(b) Twice as the power of unmodulated carrier
(c) $3 / 2$ times the power of unmodulated carrier
(d) $2 / 3$ times the power of unmodulated carrier

## CS1

(94.) A signal having uniformly distributed amplitude in the interval (-ve, +ve ) is to be encoded using PCM with uniform quantization. The signal to quantizing noise ratio is determined by the
(a) Dynamic range of the signal
(b) Number of quantizing level
(c) Sampling rate
(d) Power spectrum of signal

## AE1

(95.) An operational amplifier has a slew rate of $100 \mathrm{v} /$ microsecond. For a frequency of 10 MHz the maximum value of the sine-wave output voltage will be
(a) 100 V
(b) $\frac{50}{\pi} \mathrm{~V}$
(c) 10 V
(d) 5 V

## AE1

(96.) For sustaining oscillations in a feedback amplifier. The loop gain should be
(a) Zero
(b) Less than one
(c) Greater than one
(d) None of these

## AE1

(97.) The feedback factor ' $\beta \mathrm{A}_{\mathrm{V}}$ ' is negative for negative feedback
(a) True
(b) False
(c) May or may not be
(d) None of these

CS1
(98.) The signal/noise ( $\mathrm{S} / \mathrm{N}$ ) ratio of an amplifier developing an output voltage of 10 V and a noise voltage of 1 mV is ....... dB.
(a) 40
(b) 100
(c) -40
(d) 80

AE1
(99.) The input impedance in a voltage shunt feedback is
(a) Decreased
(b) Increased
(c) Remains unchanged
(d) None of these

AE1
(100.) Parasitic oscillations in amplifiers are caused by
(a) Negative feedback
(b) Push-pull operation
(c) Poor inter-stage coupling
(d) Transistor inter-junction capacitance

## Section-II : General Study

(101.) What is 'Pimpri' famous for?
(a) Chemicals factory
(b) Fertilizer factory
(c) Antibiotics factory
(d) Cement factory
(102.) The hardest part in a tooth is
(a) Dental tubule
(b) Dentine
(c) Enamel
(d) Pulp
(103.) Panchayat polls held in Jammu and Kashmir after the gap of
(a) 40 years
(b) 20 years
(c) 33 years
(d) 23 years
(104.) In how many years is Khumbh mela held?
(a) 3
(b) 5
(c) 8
(d) 12
(105.) In which year did Mahatma Gandhi launched " first non co-operation movement"
(a) 1917
(b) 1918
(c) 1919
(d) 1920
(106.) Tagore's Gitanjali is
(a) A collection of poems
(b) A collection of short stories
(c) A collection of dramas
(d) A novel
(107.) Where were the first Asian Games held?
(a) New Delhi
(b) Teheran
(c) Tokyo
(d) Bangkok
(108.) Who wrote 'Mudrarakshasa'?
(a) Kautilya
(b) Vishakhadatta
(c) Kalhana
(d) Kalidas
(109.) Word Environment Day was observed on
(a) 5 May 99
(b) 15 May 99
(c) 5 June 99
(d) 5 July 99
(110.) Titan is the name of the moon related to planet
(a) Uranus
(b) Neptune
(c) Saturn
(d) There is no such moon
(111.) The best source of Vitamin $A$ is
(a) Lima bean
(b) Carrot
(c) Tomato
(d) Orange
(112.) Romario matched the career total of retired Zico by
(a) 830 goals
(b) 835 goals
(c) 834 goals
(d) 831 goals
(113.) Chairman of the Cricket Board's Zonal Academics
(a) N Venkat Rao
(b) Jag Mohan Dalmia
(c) Chandru Borde
(d) Kapil Dev
(114.) Minister of parliamentary Affairs and Communications and Information Technology of Government of India is
(a) Uma Bharati
(b) Pramod Mahajan
(c) Murli Manaohar Joshi
(d) Uma Kashyap
(115.) The first bullet train is assembled in
(a) South Korea
(b) North Korea
(c) Japan
(d) Malaysia
(116.) Reema said that she had never ... a books she liked so much.
(a) Held upon
(b) Saw into
(c) Come across
(d) Viewed on
(117.) Being punctual is necessary in your job. (Substitute the underlined word without changing its meaning).
(a) Attractive
(b) Free from worries
(c) On time
(d) Cheerful
(118.) Sharma did not work .... So his master asked him to leave.
(a) Proper
(b) Properly
(c) Rightly
(d) Straight
(119.) He looked very grave. Which of the following words has the closest meaning to the word underlined.
(a) Angry
(b) Serious
(c) Frightened
(d) Upset
(120.) Let's go for a walk. The tag question required for this statement is
(a) Shall we?
(b) Should we?
(c) Don't we?
(d) Do we?

## ANSWER KEY

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{a}$ | $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{a}$ | $\mathbf{a}$ | $\mathbf{c}$ | $\mathbf{c}$ |
| $\mathbf{1 1}$ | $\mathbf{1 2}$ | $\mathbf{1 3}$ | $\mathbf{1 4}$ | $\mathbf{1 5}$ | $\mathbf{1 6}$ | $\mathbf{1 7}$ | $\mathbf{1 8}$ | $\mathbf{1 9}$ | $\mathbf{2 0}$ |
| $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{c}$ |
| $\mathbf{2 1}$ | $\mathbf{2 2}$ | $\mathbf{2 3}$ | $\mathbf{2 4}$ | $\mathbf{2 5}$ | $\mathbf{2 6}$ | $\mathbf{2 7}$ | $\mathbf{2 8}$ | $\mathbf{2 9}$ | $\mathbf{3 0}$ |
| $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{c}$ | $\mathbf{c}$ | $\mathbf{c}$ | $\mathbf{a}$ |
| $\mathbf{3 1}$ | $\mathbf{3 2}$ | $\mathbf{3 3}$ | $\mathbf{3 4}$ | $\mathbf{3 5}$ | $\mathbf{3 6}$ | $\mathbf{3 7}$ | $\mathbf{3 8}$ | $\mathbf{3 9}$ | $\mathbf{4 0}$ |
| $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{a}$ | $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{d}$ | $\mathbf{b}$ | $\mathbf{a}$ |
| $\mathbf{4 1}$ | $\mathbf{4 2}$ | $\mathbf{4 3}$ | $\mathbf{4 4}$ | $\mathbf{4 5}$ | $\mathbf{4 6}$ | $\mathbf{4 7}$ | $\mathbf{4 8}$ | $\mathbf{4 9}$ | $\mathbf{5 0}$ |
| $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{d}$ | $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{d}$ | $\mathbf{b}$ | $\mathbf{d}$ |
| $\mathbf{5 1}$ | $\mathbf{5 2}$ | $\mathbf{5 3}$ | $\mathbf{5 4}$ | $\mathbf{5 5}$ | $\mathbf{5 6}$ | $\mathbf{5 7}$ | $\mathbf{5 8}$ | $\mathbf{5 9}$ | $\mathbf{6 0}$ |
| $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{a}$ | $\mathbf{a}$ | $\mathbf{c}$ | $\mathbf{d}$ |
| $\mathbf{6 1}$ | $\mathbf{6 2}$ | $\mathbf{6 3}$ | $\mathbf{6 4}$ | $\mathbf{6 5}$ | $\mathbf{6 6}$ | $\mathbf{6 7}$ | $\mathbf{6 8}$ | $\mathbf{6 9}$ | $\mathbf{7 0}$ |
| $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{a}$ |
| $\mathbf{7 1}$ | $\mathbf{7 2}$ | $\mathbf{7 3}$ | $\mathbf{7 4}$ | $\mathbf{7 5}$ | $\mathbf{7 6}$ | $\mathbf{7 7}$ | $\mathbf{7 8}$ | $\mathbf{7 9}$ | $\mathbf{8 0}$ |
| $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{d}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{d}$ |
| $\mathbf{8 1}$ | $\mathbf{8 2}$ | $\mathbf{8 3}$ | $\mathbf{8 4}$ | $\mathbf{8 5}$ | $\mathbf{8 6}$ | $\mathbf{8 7}$ | $\mathbf{8 8}$ | $\mathbf{8 9}$ | $\mathbf{9 0}$ |
| $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{d}$ | $\mathbf{b}$ | $\mathbf{a}$ | $\mathbf{c}$ | $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{b}$ | $\mathbf{a}$ |
| $\mathbf{9 1}$ | $\mathbf{9 2}$ | $\mathbf{9 3}$ | $\mathbf{9 4}$ | $\mathbf{9 5}$ | $\mathbf{9 6}$ | $\mathbf{9 7}$ | $\mathbf{9 8}$ | $\mathbf{9 9}$ | $\mathbf{1 0 0}$ |
| $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{c}$ | $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{a}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{d}$ |
| $\mathbf{1 0 1}$ | $\mathbf{1 0 2}$ | $\mathbf{1 0 3}$ | $\mathbf{1 0 4}$ | $\mathbf{1 0 5}$ | $\mathbf{1 0 6}$ | $\mathbf{1 0 7}$ | $\mathbf{1 0 8}$ | $\mathbf{1 0 9}$ | $\mathbf{1 1 0}$ |
| $\mathbf{c}$ | $\mathbf{c}$ | $\mathbf{d}$ | $\mathbf{d}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{c}$ | $\mathbf{c}$ |
| $\mathbf{1 1 1}$ | $\mathbf{1 1 2}$ | $\mathbf{1 1 3}$ | $\mathbf{1 1 4}$ | $\mathbf{1 1 5}$ | $\mathbf{1 1 6}$ | $\mathbf{1 1 7}$ | $\mathbf{1 1 8}$ | $\mathbf{1 1 9}$ | $\mathbf{1 2 0}$ |
| $\mathbf{b}$ | $\mathbf{d}$ | $\mathbf{a}$ | $\mathbf{b}$ | $\mathbf{a}$ | $\mathbf{c}$ | $\mathbf{c}$ | $\mathbf{b}$ | $\mathbf{b}$ | $\mathbf{a}$ |

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