

1. When four resistances of  $2\Omega$  1W;  $5\Omega$  2W;  $10\Omega$  5W and  $15\Omega$  10 W are connected in parallel, the greatest power is absorbed by

- $2\Omega$ , 1 W
- $5\Omega$ , 2 W
- $10\Omega$ , 5W
- $15\Omega$ , 10 W

2. A moving coil instrument has a resistance of  $10\Omega$  and gives full scale deflection when carrying a current of 50 mA. To measure current upto 100 A, we will have to connect

- $10\Omega$  resistance in series
- $10\Omega$  resistance in parallel
- $10/1999\Omega$  resistance in series
- $10/1999\Omega$  resistance in parallel

3. The ripple voltage in the output of a single phase half wave rectifier with 10 V rectified dc voltage with resistive load and without filter will be

- 12.1 volt
- 1.21 volt
- 0.482 volt
- 4.82 volt

4. The transformer connection which has gained considerable popularity to serve 3-phase equipment and single phase lighting load is

- Star/Star
- Delta/Delta
- Delta/Star
- Star/Delta

5. Transformer oil tester is used to know

- Permittivity
- Permeability
- Dielectric strength
- Resistance of the oil

6. Plate separation of a parallel plate air capacitor is reduced keeping the voltage constant. The energy stored in the capacitor shall

- Increase
- Decrease
- Remain constant
- Remain zero

7. 1 Ampere of current is defined as

- 1 volt/sec
- 1 coulomb/sec
- 1 ohm/second
- 1 coulomb

8. The synchronous motor can be used as a capacitor

- By increasing excitation
- By decreasing excitation

- By increasing speed
- By decreasing speed

9. The actual speed of an induction motor is always

- Less than synchronous speed
- More than synchronous speed
- Equal to synchronous speed
- None of the above.

10. The purpose of connecting a capacitor in fluorescent tube circuit is

- To increase switching on time
- To decrease switching off time
- To increase power factor
- To decrease power consumption

11. The condition for parallel operation of two inverters is

- Amplitude of voltages should be same.
- Frequency of voltages should be same.
- Both the voltages should be in same phase.
- All the three above.

12. A 60 Hz, 2 pole alternator should run at

- 3000 r.p.m.
- 1500 r.p.m.
- 3600 r.p.m.
- 1800 r.p.m.

13. The purpose of a governor in a DG set is

- To regulate the speed.
- To regulate the voltage
- To regulate the power
- To regulate the current.

14. A S C R can conduct

- In one direction only.
- In both directions.
- Only when gate is triggered.
- None of the above.

15. The cut-in voltage of a silicon diode is approx.

- 0.7 volt
- 0.3 volt
- 1.4 volt
- None of the above.

16. The step Recovery Diode is used as

- Frequency adder
- Frequency subtractor

- Frequency multiplier
- None of the above.

17. The isolation between input and output in case of opto coupler is of the order of

- 10 Ohms
- $10^{10}$  ohms
- $10^3$  ohms
- None of the above.

18. The transistor configuration to connect 4  $\Omega$  speaker with 600  $\Omega$  output impedance audio amplifier is

- Common Emitter
- Common Base
- Common Collector
- None of the above.

19. Beta cut-off frequency of a transistor is the frequency at which the Beta is

- 0.707 of low frequency value
- Zero
- Equal to low frequency value
- None of the above.

20. Which of the following amplifier has the least distortion.

- Class E
- Class D
- Class C
- Class A

21. Pinch off voltage of a J FET is the drain to source voltage above which drain current.

- Increases
- Decreases
- Remains constant
- Becomes zero

22. Decimal equivalent of binary 1111 1111 1111 1111 is

- 16,384
- 65,536
- 1000000
- None of the above.

23. A  $\lambda/2$  dipole aerial is used for

- MW
- SW
- Microwave
- None of the above.

24. TCXO is preferred over LC oscillator because

- TCXO is more stable.
- TCXO gives more power
- TCXO is linear.
- None of the above.

25. The angular velocity of geo-stationary satellite is

- Equal to the angular velocity of earth.
- Less than the angular velocity of earth.
- More than the angular velocity of earth
- None of the above.

26. The battery operated pre-amplifier with a consumption of 10 Watts can work on battery of 12 volt, 100 AH having efficiency of 50% for

- 120 hrs.
- 60 hrs.
- 100 hrs.
- 10 hrs.

27. Low pass filter with cut off frequency of 100 kHz and high pass filter with cut off frequency of 50 kHz are connected in tandem, the resultant filter is

- Low pass filter with cut off frequency of 100 kHz
- High pass filter with cut off frequency of 50 kHz
- Band pass filter with pass band from 50 kHz to 100 kHz.
- None of the above.

28. In case of oil fire, the fire extinguisher used is

- Soda Acid
- Foam
- Carbon dioxide
- Carbon Tetra chloride

29. The output of a 2-input NAND gate with high at both the inputs will be

- High
- Low
- High & low
- None of the above.

30. The input impedance of an op-amp is

- High
- Low
- Medium
- None of the above

### **Answers**

1(a), 2 (d), 3 (a), 4 (c), 5 (c) 6 (a) 7 (b) 8 (a) 9 (a) 10 (c) 11 (d) 12 (c) 13 (a) 14 (a) 15 (a)  
16 (c) 17 (b) 18 (c) 19 (a) 20 (d) 21 (c) 22 (b) 23 (b) 24 (a) 25 (a) 26 (b) 27 (c) 28 (b) 29 (b) 30 (a).