

General Instructions to candidates:

- 1) All questions carry equal marks.
- 2) No negative marks.
- 3) Answer all questions.
- 4) Every question has 4 options and only ONE is CORRECT Answer.
- 5) Use OMR sheet for marking the correct answer by bubbling with BLUE or BLACK ballpoint pen only.

1. The standard current ratings of an electromagnetic relay are
 1. 5A and 15 A
 2. 15A and 20 A
 3. 1A and 5 A
 4. none of these
2. ICDP switch stands for
 1. iron clad double pole
 2. iron cloud double pole
 3. iron clad double piece
 4. none of these
3. Resistance of a 250V 100W lamp will be
 1. 0.4 ohms
 2. 25 ohms
 3. 625 ohms
 4. 2.5ohms
4. The condition of a fully charged lead acid battery can be checked by
 1. voltage
 2. specific gravity of electrolyte
 3. gassing
 4. all of these
5. The ratio of peak value and RMS value is called the
 1. form factor
 2. RMS factor
 3. peak factor
 4. effective factor

6. If the wire is drawn out to three times its original length, by how much times would you expect its resistance to be increased
 1. 3 times
 2. 6 times
 3. 9 times
 4. 1/3 times
7. The capacity of a battery is measured in
 1. Watt hours
 2. Watts
 3. Amperes
 4. Ampere hours
8. When the frequency in AC circuit is high, the wave length is
 1. high
 2. short
 3. both A and B
 4. Neither A nor B
9. In Delta Delta connection if one transformer becomes disabled, the capacity will reduce to
 1. 0.6667
 2. 0.5774
 3. 0.5
 4. 0.3333
10. The maximum speed variation in a 3-Phase Synchronous Motor is
 1. zero
 2. 0.06
 3. 0.04
 4. 0.02
11. The speed of a Synchronous motor can be changed by changing
 1. supply voltage
 2. supply frequency
 3. excitation
 4. none of these
12. Cylindrical pole type Rotors are generally used with prime movers of
 1. High speed
 2. low speed
 3. medium speed
 4. low and high speed
13. For the same rating an Alternator is -----that of DC generator
 1. larger in size than
 2. smaller in size than
 3. of the same size
 4. none of these

14. A steam turbine converts
1. steam energy into mechanical energy
 2. steam energy into electrical energy
 3. steam energy into coal energy
 4. electrical energy into steam energy
15. A 3-Phase, 400 V. 50Hz induction Motor runs at a slip of 5%.The phase sequence of supply is changed. At that instant of changing of phase sequence, the slip is
1. same
 2. 1.95
 3. 2
 4. 1
16. The function of Commutator in a DC generator
1. Converter
 2. inverter
 3. neither A nor B
 4. either A or B
17. The instrument which is used to measure energy is
1. ammeter
 2. voltmeter
 3. watt meter
 4. watt hour meter
18. Which part of the boiler will have lightest pressure in a thermal power plant
1. economiser
 2. super heater
 3. steam drum
 4. feed water
19. For economical proposition, the transmission of electrical energy is by
1. 3-phase 4-wire system
 2. 3-phase 3-wire system
 3. 3-phase 1-wire system
 4. 3-phase 2-wire system
20. The inductance of transmission line is
1. series element
 2. shunt element
 3. either A or B
 4. none of these
21. The choice of economic span length of transmission line depends up on
1. size of conductor
 2. material of conductor
 3. number of conductors
 4. all of these

22. The opposition offered by the material to magnetic flux is called
1. Magnetic flux density
 2. Magnetic flux
 3. reluctance
 4. none of these
23. To produce an 800 Hz sine wave, a four-pole generator must be operated at
1. 200 rps
 2. 400 rps
 3. 800 rps
 4. 1,600 rps
24. The power loss due to eddy current is directly proportional to
1. square of maximum flux density
 2. Square of frequency
 3. Square of thickness of lamination
 4. all of these
25. The phase difference between EMF induced in primary and secondary windings of a Transformer is
1. 180degrees
 2. 90 degrees
 3. 45degrees
 4. zero degree
26. The speed vs. load characteristics of a universal motor is same as that of
1. DC shunt motor
 2. DC series motor
 3. AC motor
 4. none of these
27. In two watt meter method, the power can be calculated when load is
1. balanced
 2. un balanced
 3. either balanced or un balanced
 4. none of these
28. The candle power of a lamp is 200. If the lamp is at a height of 5 meters above the working plane, the luminous flux is -----lux
1. 6
 2. 10
 3. 8
 4. 12
29. India's first nuclear power plant was built at
1. kola
 2. tarapur
 3. kalpakkam
 4. narora

30. Induction type of instruments are used for

1. DC only
2. AC only
3. both A and B
4. none of these