

1. Which one of the following is called as valence electron in an atom ?
(A) No. of electrons in inner orbit
(B) No. of electrons in N shell
(C) No. of electrons in outermost orbit
(D) No. of electrons in M shell
2. One mega ohm is equal to _____ ohm.
(A) 1×10^6 (B) 1×10^{-6} (C) 1×10^3 (D) 1×10^{-3}
3. Which factor does not depend on resistance of the conductor among the following factors ?
(A) Length (B) Material (C) Voltage (D) Temperature
4. Which material has the negative temperature co-efficient among the following ?
(A) Copper (B) Aluminium (C) Tungsten (D) Carbon
5. The equivalent resistance of the parallel circuit is _____ than the smallest single resistance.
(A) Greater (B) Smaller (C) Equal (D) Half
6. The total value of two resistance is 25Ω when connected in series and 6Ω when connected in parallel. Find the value of two resistance.
(A) $10 \Omega, 15 \Omega$ (B) $12 \Omega, 13 \Omega$ (C) $20 \Omega, 5 \Omega$ (D) $19 \Omega, 6 \Omega$
7. Size of the wires can be measured normally by standard wire gauge. Which instrument must be used for accurate measurement of wire size ?
(A) Vernier calliper (B) Depth gauge (C) Fuel gauge (D) Micro meter
8. The solder used for soldering consists of an alloy of tin and lead. What is the combination of tin and lead of solder used for electrician solder ?
(A) Tin 50%, lead 50% (B) Tin 60%, lead 40%
(C) Tin 35%, lead 65% (D) Tin 90%, lead 10%
9. What is the use of Eureka wire ?
(A) Rheostat (B) Heating element (C) Earth wire (D) Winding wire

10. What is the unit of work done in SI units ?
 (A) Erg (B) Kg Meter (C) Dyne (D) Joule
11. One watt is define as _____.
 (A) Joule-second (B) Joule per minute (C) Joule per second (D) Joule-minute
12. The commercial unit of Electrical energy is _____.
 (A) Joule (B) Kilowatt hour (C) Watt - hour (D) Ampere hour
13. An electric installation consists of ten light points of 60 watts each, used for only one second. What is the consumed power ?
 (A) 60 watts (B) 6 watts (C) 600 watts (D) 0.166 watts
14. An industry has 100 numbers of 200 watt light load. How many numbers of sub circuits are required ?
 (A) 10 (B) 25 (C) 5 (D) 4
15. How many numbers of positive and negative plates are placed in a 9 plate lead acid cell ?
 (A) 4 positive plate and 4 negative plate
 (B) 5 positive plate and 4 negative plate
 (C) 5 positive plate and 5 negative plate
 (D) 4 positive plate and 5 negative plate
16. The capacity of storage cell is always specified in _____.
 (A) Full voltage rating (B) Ampere rating
 (C) Ampere hour rating (D) Voltage rating
17. Which type of DC generator is used for battery charging ?
 (A) Cumulative compound generator (B) Shunt generator
 (C) Differential compound generator (D) Series generator
18. In which type of DC motor, two point starter is used ?
 (A) Series motor (B) Shunt motor
 (C) Long shunt compound motor (D) Short shunt compound motor

19. A permanent magnet moving coil instrument will read :
(A) Only AC quantities (B) Both AC and DC quantities
(C) Only DC quantities (D) Pulsating quantities
20. What is the colour of neutral in single phase or three phase circuits ?
(A) Black (B) Blue (C) Yellow (D) Green
21. One lamp can be controlled from five locations by using intermediate switches and two way switches. How many numbers of intermediate switches and two way switches are required to control a lamp from 5 positions ?
(A) Intermediate switches 2 and two way switches 3
(B) Intermediate switches 4 and two way switches 1
(C) Intermediate switches 1 and two way switches 4
(D) Intermediate switches 3 and two way switches 2
22. What will happen to the value of earth resistance if the length of the earth pipe is increased ?
(A) Increase (B) Decrease
(C) Remain same (D) None of the above
23. What is the SWG of copper earth conductor if the maximum circuit current is 15 A ?
(A) No. 14 (B) No. 10 (C) No. 12 (D) No. 8
24. What is the thickness of copper plate used for earth electrode ?
(A) 6.3 mm (B) 3 mm (C) 3.3 mm (D) 3.15 mm
25. What is the number of poles if the speed is 3000 RPM and frequency is 50 Hz of an alternator ?
(A) 4 (B) 2 (C) 6 (D) 8
26. Alternators are rated in _____.
(A) KW (B) HP (C) KVA (D) KVAR
27. What is the working principle of a two winding transformer ?
(A) Self-induction (B) Mutual induction
(C) Principle of DC motor (D) Lenz's Law

28. The core loss in a transformer is constant during _____.
- (A) quarter load (B) half load (C) full load (D) all load
29. Since transformer is a static device, it has a very high efficiency. What is the normal % efficiency of a transformer ?
- (A) 75-80% (B) 80-85% (C) 85-90% (D) Above 90%
30. Which of the following speed is called synchronous speed in three phase induction motor ?
- (A) Speed of the rotor
(B) Speed of the stator
(C) Speed of the rotating magnetic field
(D) Speed of the flux produced in the rotor
31. When a speed of an induction motor is increased, what will happen to the rotor frequency ?
- (A) Decrease (B) Increase (C) Remain constant (D) Zero
32. What is the main difference in the construction of slipping induction motor as compared to squirrel cage induction motor ?
- (A) The rotor having skewed slots
(B) Rotor is wound with three phase winding and connected in star
(C) The copper bars are inserted into the rotor slots
(D) The ends of the rotor are embedded
33. Which is the cause for a 3 phase induction motor failing to start ?
- (A) Incorrect size of fuse (B) High frequency
(C) Stiff bearing (D) Dirt in ventilation duct
34. What is the effect of single phasing in three phase induction motor ?
- (A) Motor will not run (B) Burn due to overheating
(C) No change in running (D) Will make humming noise

35. A 6 pole induction motor is connected to a 50 C/S supply. It is running at 970 rev/min. What is the percentage slip ?
(A) 3% (B) 4% (C) 5% (D) 6%
36. When motor is fed with reduced voltage, the motor draws excess current to drive the load. When a motor is fed with an over voltage, how much current will the motor draw ?
(A) Low current (B) Normal current (C) Excess current (D) Zero current
37. Which is the correct method to change the direction of rotation of a permanent capacitor motor ?
(A) By interchanging the supply terminals.
(B) By interchanging auxiliary winding terminals.
(C) By interchanging capacitor terminals.
(D) By interchanging the rotor position.
38. What will happen to the universal motor when it is started without load ?
(A) It will not run (B) Run with very low speed
(C) Run with very high speed (D) Run with normal speed
39. One of the main specifications of ceiling fan is sweep size. What does the sweep size represent in ceiling fan ?
(A) Length of each blade
(B) Twice the length of one blade
(C) The size of the fan housing
(D) Two times of the radius of the performed by the blade circle
40. Which type of single phase motor has very high starting torque ?
(A) Permanent capacitor type (B) Double capacitor motor
(C) Universal motor (D) Capacitor start induction run motor
41. Which part of the PMMC instrument produces eddy current damping ?
(A) Moving coil (B) Aluminium former
(C) Permanent magnet (D) Soft iron cylindrical core

42. Which quantity can be measured by using dynamometer type watt meter ?
(A) AC and DC power (B) AC power only
(C) DC power only (D) KWH
43. Instrument used to measure very high value of resistance is :
(A) Ohm meter (B) Multimeter (C) Meter bridge (D) Megger
44. Among the following, which device cannot be used as a safety device ?
(A) Fuse (B) Earth tester (C) Circuit breaker (D) ELCB
45. Which is the working principle of an instrument transformer ?
(A) Self - induction (B) Lenz's law
(C) Mutual induction (D) Fleming's right hand rule
46. A clip-on meter is used to measure _____.
(A) Power (B) Resistance (C) Voltage (D) Current
47. The energy meter disc completes 800 revolutions in 8 minutes when 2 kW load is connected. Which is the meter constant of the meter ?
(A) 6000 (B) 2500 (C) 3000 (D) 4500
48. What happens if the output filter capacitor is opened in a battery charger ?
(A) It will not work (B) Make humming noise
(C) High output (D) Take more output current
49. Switch board is fixed at a height of _____ as per IE rules.
(A) 1.5 M (B) 2.5 M (C) 2 M (D) 3 M
50. How many light points are allowed in one circuit ?
(A) 15 points (B) 12 points (C) 14 points (D) 10 points
51. Batten wiring is recommended for which of the following wiring ?
(A) Industrial (B) Power (C) Permanent (D) Temporary

52. Earthing is done for providing a path to ground :
 (A) High voltage (B) Leakage current (C) Over current (D) Circuit current
53. The rating of fuse is expressed in terms of _____.
 (A) KVA (B) KVAR (C) Voltage (D) Current
54. A delayed action cartridge fuse is for _____.
 (A) Lighting circuits (B) Heating circuits
 (C) Motor circuits (D) Fluorescent lamp circuit
55. In continuity test, short in an installation is indicated in a Megger by _____.
 (A) 500 M Ω (B) Infinity M Ω (C) 1 M Ω (D) 0 M Ω
56. A four pole 1200 RPM alternator will generate emf at a frequency of _____.
 (A) 25 Hz (B) 40 Hz (C) 50 Hz (D) 60 Hz
57. A lead acid cell is rechargeable because _____.
 (A) it is a wet cell (B) its electrolyte has high specific gravity
 (C) its chemical reaction is reversible (D) its electrolyte is H₂SO₄
58. The metal used for the control spring in an electrical instrument is _____.
 (A) Steel (B) Nichrome
 (C) Hard drawn copper (D) Phosphor bronze
59. The fixed coils of a dynamometer are used as _____ in a watt meter.
 (A) Deflecting coil (B) Pressure coil
 (C) Current coil (D) Both pressure and current coil
60. The maximum current that can pass through a 2 Ω , 2 watt resistor will be :
 (A) 1 A (B) 3 A (C) 2 A (D) 4 A

61. The function of current reverser in the earth tester is _____.
- (A) to convert AC into DC (B) to invert AC into DC
(C) to reverse the current direction (D) to invert DC into AC
62. One BOT unit is equal to _____.
- (A) 1000 Wh (B) 746 Wh (C) 1500 Wh (D) 1200 Wh
63. When the phase and neutral of an energy meter are inter changed, its disc _____.
- (A) rotates in reverse direction (B) rotates in correct direction
(C) will stop (D) will rotate slowly
64. The quantity of scale on the dial of the Multimeter at the top most is :
- (A) DC current (B) AC current (C) AC voltage (D) Resistance range
65. The resistor element used in fan regulator is _____.
- (A) Eureka (B) Carbon (C) Nichrome (D) Tungsten
66. The dielectric strength of insulation is called _____.
- (A) Barriers voltage (B) Peak inverse voltage
(C) Breakdown voltage (D) Peak voltage
67. Soldering is done on joints to improve _____.
- (A) tensile strength (B) resistivity (C) ductility (D) conductivity
68. When the disc of an energy meter is rotating even without connecting any load, the error is called _____.
- (A) Creeping error (B) Phase error (C) Friction error (D) Speed error
69. Cells are connected in series to _____.
- (A) decrease the output voltage (B) increase the output voltage
(C) decrease the internal resistance (D) increase the current capacity