

Completed

Sree Chitra Tirunal Institute for Medical Sciences & Technology,
Thiruvananthapuram-695011

Written test – Junior Engineer (Electrical)

4th DEC, 2012

Roll Number:

1. Fuse wire is made of
 - A) Lead-tin alloy
 - B) Copper
 - C) Nichrome
 - D) Tungsten
2. In electrical engineering "XLPE" relates to
 - A) Switch
 - B) Lamp
 - C) Earthing
 - D) Cable
3. What should be the value of earth resistance as per Indian Electricity Rules
 - A) 5 to 10 Ohms
 - B) 50 to 100 Ohms
 - C) 500 to 1000 Ohms
 - D) Less than 1 Ohm
4. Which instrument is used for measurement of earth resistance
 - A) Multi meter
 - B) Megger
 - C) Voltmeter
 - D) Wattmeter
5. Which of the following is Electrolytic conductor
 - A) Copper
 - B) Sulphuric acid
 - C) Aluminium
 - D) Air
6. Minimum fault level assumed for earthing design at 11KV side of a power system is
 - A) 15MVA
 - B) 1500MVA
 - C) 50MVA
 - D) 150MVA
7. Maximum earth resistance of HT premises shall be limited to
 - A) 10 Ohm
 - B) 100 Ohm
 - C) 1 Ohm
 - D) 50 Ohm
8. If current in an electric bulb drops by 2% then power decreases by
 - A) 2%

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- B) 4%
- C) 1%
- D) 16%

9. Out of the materials given below which has the highest dielectric strength

- A) Glass
- B) Mica
- C) Oiled paper
- D) Air

10. The armature of a D.C generator is laminated to

- A) Reduce the size
- B) Provide passage for cooling air
- C) Insulate the core
- D) Reduce eddy current loss

11. Core laminations of D.C generator are usually made of

- A) Cast iron
- B) Carbon
- C) Silicon steel
- D) Stainless steel

12. First atomic power station in India is

- A) Koodamkulam
- B) Tarapur
- C) Kalpakkam
- D) Kota

13. The unit for measurement of capacitance is

- A) Ohm
- B) Farad
- C) Ampere
- D) Volt

14. The r.m.s value of alternating current is equal to

- A) 0.637 of max: value
- B) 0.707 of max: value
- C) 1.414 of max: value
- D) The maximum value

15. Which metal is used for making fuse wire

- A) Aluminium
- B) Silver
- C) Tinned copper
- D) Copper

16. The 3 windings of 3-phase induction motor should be installed at a distance of

- A) 90 electrical degrees
- B) 120 electrical degrees
- C) 360 electrical degrees
- D) 60 electrical degrees

17. Which of the following motor does not have commutator

- A) Repulsion motor
- B) Induction motor
- C) D.C. shunt motor
- D) A.C. series motor

18. The purpose of providing dummy coils in generator is to
A) Reduce flux density
B) Enhance flux density
C) amplify voltage
D) provide mechanical balance for rotor
19. The material for commutator brushes is generally
A) Copper
B) Mica
C) Carbon
D) Cast iron
20. Resistance can be measured with
A) Watt meter
B) Ammeter
C) Voltmeter
D) Multimeter
21. 1 Unit of electricity means
A) 1KWH
B) 1KVAR
C) 10KWH
D) 1KW
22. For a sine wave with peak value "I", the r.m.s value is
A) 0.818 I
B) 0.707 I
C) 0.5 I
D) 1.414 I
23. The voltage of domestic supply is 220V. This figure represents
A) Peak value
B) RMS value
C) Average value
D) Mean value
24. Dielectric constant for air is taken as
A) Zero
B) 1
C) 100
D) Infinite
25. Approximate electric current drawn by 1.5 ton window a.c when it is working is
A) 10A
B) 100A
C) 1A
D) 0.5A
26. Which of the following motor will give relatively high starting torque
A) Shaded pole motor
B) Capacitor run motor
C) Split phase motor
D) Capacitor start motor
27. Hermetically sealed motors are commonly used in
A) Ceiling fans

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- B) Blowers
- C) Refrigerators
- D) Mixies

28. The electric motor used in portable drill is

- A) Universal motor
- B) Capacitor run motor
- C) Repulsion motor
- D) Hysteresis motor

29. The hum in transformer is developed in

- A) Core
- B) Winding
- C) Cooling oil
- D) Tank

30. In a transformer the resistance between its primary and secondary is

- A) Zero
- B) 1 Ohm
- C) 1000 Ohms
- D) Infinite

31. Bucholz relay is used on

- A) Mercury arc rectifiers
- B) Transformers
- C) D.C series motors
- D) Alternators

32. In a refrigerator, the input for thermostat is

- A) Reference voltage
- B) Reference current
- C) Reference temperature
- D) Reference heat

33. Connected load is

- A) The rating in kW of installed electrical load
- B) Maximum load put on at any time
- C) Part of load always remain ON
- D) Average load during a period

34. Wattage of immersion heater is in the range of

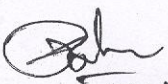
- A) 50W to 150W
- B) 50W to 500W
- C) 750W to 2000W
- D) 5KW to 15KW

35. Most of the power generation in India is through

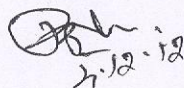
- A) Thermal power plants
- B) Nuclear power plants
- C) Diesel power plants
- D) Gas turbine power plants

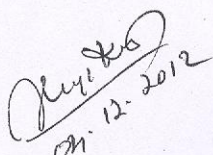
36. Load shedding is done to

- A) Reduce peak demand
- B) To improve power factor
- C) To run the equipment efficiently
- D) To repair the machine


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37. Which public sector undertaking is engaged in erection and running of thermal power plants
A) BHEL
B) BEL
C) NTPC
D) SAIL
38. The size of power transformer is usually expressed in
A) Volts
B) KW
C) KVA
D) KVAR
39. Which of the following equipment offers nearly unity power factor
A) Arc lamp
B) Induction motor
C) Tube light
D) GLS Lamp
40. Induction motor has relatively high power factor at
A) No load
B) 25% load
C) rated r.p.m
D) Near full load
41. Power factor is given by
A) KWH/KW
B) Active power/Reactive power
C) Reactive power/Active power
D) KW/KWh
42. Highest transmission voltage used in India is
A) 440V
B) 11KV
C) 132KV
D) 400KV
43. Transmission voltage of 11KV is normally used for distances up to
A) 1-2 KM
B) 20-25 KM
C) 50-60 KM
D) 100-150 KM
44. Insulators are generally made of
A) Glass
B) Porcelain
C) RCC
D) Cadmium
45. In cables the thickness of the layer of insulation depends upon
A) Current carrying capacity
B) Voltage
C) Power factor
D) Reactive power


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46. Suspension type insulators are used for voltages above

- A) 11KV
- B) 33 KV
- C) 66 KV
- D) 132 KV

47. Fuse wires are usually made of

- A) Copper-aluminium alloy
- B) Tin-lead alloy
- C) Lead-zinc alloy
- D) Stainless steel

48. A fuse wire is never inserted in

- A) Phase line
- B) Positive of DC circuit
- C) Negative of DC circuit
- D) Neutral wire

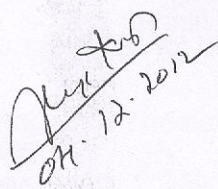
49. A short circuit is identified by


- A) Voltage drop
- B) Voltage rise
- C) Heavy current flow
- D) No current flow

50. Least illumination level is required in case of

- A) Hospital wards
- B) Drawing offices
- C) Fine machine work
- D) Skilled bench work

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