# SUBJECT: ELECTRICAL MATERIALS & WIRING PRACTICE

# SUBJECT CODE: 22328 TOTAL MARKS:30 TIME:60 MINUTES

INSTRUCTIONS: 1.Attempt Any THIRTY Questions of the following.

- 2. Assume Suitable Data ,If Necessary.
- 3. Figures to the right indicate full marks.
  - 4. Select/ Mark correct answer.

# ELECTRICAL MATERIALS & WIRING PRACTICE(22328)

- 1. Identify the Rule No of statement:PROVISIONS APPLICABLE TO PROTECTIVE EQUIPMENT
- A. RULE 35
- **B. RULE 43**
- C. RULE 29
- D. RULE 44
- 2. Gloves used for electrical protection must be electrically tested every......
- A. 3 months
- B. 6 months
- C. 12 months
- D.Never
- 3. While working on live main supply handle of electrical safety tool should be always insulated.

### A.TRUE

### **B.FALSE**

- 4. What is the full form of MCB?
- A. Miniature Circuit Breaker
- B. Moulded Circuit Breaker

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- C. Miniature Case Breaker
- D. Moulded Case Breaker
- 5. Which safety tool is used to connect the lugs for wires and cables?
- A. Hammer
- B. Crimping Tool
- C. Plier
- D. Line Tester
- 6. To Tight or Loose the screws or nuts in narrow locations which safety tool is used?
- A. Combination Plier
- B. Nose Plier
- C. Hammer
- D. Wire Striper
- 7. Which safety tool is used for measurement of wire diameter?
- A. Wire Gauge
- B. Continuity Tester
- C. Crimping Tool
- D. Screwdriver
- 8. What is the statement of Rule No 39?

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A. Street boxes
B. Cables Protected by Bituminous material
C. Danger Notice
D. Accidental charge
9. What is the melting point of tin?
A. 232 °C
B. 223 °C
C. 233 °C
D. 273 °C
10. The cross sectional area of loop is directly proportional to the
A. Hysteresis Loss
B. Iron Loss
C. Eddy Current Loss
D. Core Loss
11. To reduce the flux density we need to reverse the current flowing through the coil is called as
A. Coercivity

B. Retentivity

C. Saturation

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- D. Permeability
- 12. In Magnetization curve B stands for
- A. magnetic flux density
- B. magnetic field intensity
- C. magnetizing force
- D. Permeability
- 13. It is a property of magnetic materials that causes them to change their shape or dimensions during the process of magnetization is called......
- A. Magnetostriction
- B. Hysteresis loss
- C. Loss of Magnetism
- D. Magnetic Hysteresis
- 14. Expansion of dimension or shape in a magnet is called.....
- A. Positive Magnetostriction
- B. Negative Magnetostriction
- 15. Material should have ..... temperature coefficient of resistance in conductor
- A. Low
- B.High
- 16. Which Conductor is used as filaments of electric lamp?

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Δ	tungsten
л.	tungsten

- B. Copper
- C. Aluminium
- D.Gold
- 17. In thermal classification of insulators CLASS B limiting temperature °C is
- A.90
- B.130
- C.155
- D.180
- 18. Which of the following is thermal property of insulating material?
- A. Volatility
- B. Hygroscopic
- C. Solubility
- D. Permittivity

19The voltage below which the dielectric material remains stable in its property but above which it results in distraction of insulating properties is called

- A. Breakdown voltage
- B. Breakdown Strength
- C. both

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D. none
20. Factors affecting breakdown strength of gaseous dielectric materials are
A. Electrode configuration
B. Gap spacing
C. Pressure
D. All of the above
21. Breakdown strength is expressed in
A. kv/mm
B. ka/mm
C. kΩ/cm
D. ka/cm
22 of liquid dielectric is that temperature at which the liquid begins to ignite.
A. Flash point
B. Volatility
C. Melting point

23. What is the main drawback of using paper as the insulating material?

D. Thermal expansion

A. Is hygroscopic

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  - 4. Select/ Mark correct answer.
- B. Has poor dielectric strength.
- C. Has a very low insulation resistivity.
- D. Has high capacitance.
- 24. The insulating material should have
- A. Low permittivity
- B. High resistivity
- C. High dielectric strength
- D. All of the above
- 25. A Staircase Point is operated with
- A. two one way switches
- B. two two way switches
- C. two intermediate switch
- D. none of these
- 26. .....wiring is recommended only for temporary installations.
- A. Cleat wiring
- B. Casing-Capping wiring
- C. Concealed wiring
- D. PVC Conduit wiring
- 27. Which type of wiring gives more mechanical & fire protection?

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Λ	L'aging	Capping	TT/11/11/0
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<i>1</i> <b>1</b> •	Cubiling	Cupping	** 11 1115
	$\mathcal{L}$	11 0	$\mathcal{L}$

- B. Cleat wiring
- C. Conduit wiring
- D. Batten wiring
- 28. The only wiring which has to be planned well before starting of a house construction work & executed along with the construction is
- A. Conduit Surface Wiring
- B. Conduit Concealed Wiring
- C. Batten Wiring
- D. Cleat wiring
- 29. The Casing & Capping both are screwed together at every ......cms
- A. 15
- B.12
- C.8
- D.10
- 30. In which method of Laying of Underground Cables, after the cable is laid in position, the troughing is filled with a bituminous or asphaltic compound and covered over?
- A. Direct laying system
- B. Draw-in system

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  - 4. Select/ Mark correct answer.

## C. Solid system

- D. All of the above
- 31. Typical electrical cable jointing methods are
- A. Western union splice joint
- B. Rattail joint
- C. Fixture joint
- D. All of the above
- 32. What is the need of crimping of cable joints?
- A. Proper connection of the cable
- B. To Minimize contact resistance
- C. To avoid the loose connection
- D. All of the above
- 33. Definition of Earthing
- A. Earthing means connecting the metal body of electrical device to the general mass of earth by a wire of negligible resistance
- B. Earthing means connecting the metal body of electrical device to the earthing pit
- C. Earthing is the processes of connection to the specific part of installation with earth conductive surface
- D. All of the above

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- 2. Assume Suitable Data ,If Necessary.
- 3. Figures to the right indicate full marks.
  - 4. Select/ Mark correct answer.
- 34. What is the Significance of earthing?
- A. to minimize risk of receiving an electric shock
- B. to ensure safety or Protection of electrical equipment
- C. to ensure safety or Protection of Human by discharging the electrical leakage current to the earth
- D. All of the above
- 35. .... wire used for Earthing as a nomenclature
- A. Green
- B. Red
- C. Black
- D. Blue
- 36. Recommend the earthing system used for muddy area zone bungalow
- A. Plate type earthing
- B. Pipe type earthing
- C. Water rod earthing
- D. Strip earthing
- 37. The values of earth resistances for Substation is
- A. 0.5 to 1.5 ohm
- B. 5 ohm to 8 ohm

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- 3. Figures to the right indicate full marks.
  - 4. Select/ Mark correct answer.
- C. 1 ohm to 2 ohm
- D. 2 to 3 ohm
- 38. Doubling the diameter of the ground rod reduces resistance by less than 10%
- A.False
- B.True
- 39. The values of earth resistances for L.T. Line is
- A.0.5 to 1.5 ohm
- B. 5 ohm to 8 ohm
- C. 1 ohm to 2 ohm
- D. 2 to 3 ohm
- 40. Moisture content in the soil .....the earth soil resistance
- A. increase
- B. decrease
- C. does not affect
- D. none of the above