

GOVERNMENT OF MIZORAM
POWER & ELECTRICITY DEPARTMENT

COMBINED COMPETITIVE EXAMINATION FOR
RECRUITMENT TO DIFFERENT TECHNICAL POSTS
(AUGUST-2026)

PAPER-III
(ELECTRICIAN)

Full Marks : 200
Time Allowed : 3 Hours

Signature of Invigilator _____

CODE :

(For official use)

SUBJECT	MARK CARRIED BY EACH QUESTION / TOPIC	NO. OF CORRECT ANSWERS	MARKS OBTAINED
Electrician	2		
TOTAL			

Signature of Examiner : _____

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All questions carry 2 marks.

Put a tick (✓) mark against the correct answer in the space given in each question.

If a candidate gives more than one answer to one question, it will be treated as wrong answer even if one of the given answers happens to be correct.

ELECTRICIAN - 200 MARKS

1. BIS stands for:

- (a) Board of Indian Safety ()
- (b) **Bureau of Indian Standards** ()
- (c) Bureau of Industrial Safety ()
- (d) Board of Industrial Standards ()

2. ISI mark indicates:

- (a) Product price ()
- (b) Imported goods ()
- (c) **Quality certified product** ()
- (d) Export quality only ()

3. National Electrical Code-2011 is mainly related to:

- (a) Electric bill ()
- (b) Electrical license ()
- (c) **Electrical safety and installation** ()
- (d) Electrical maintenance ()

4. Insulated tools are used to:

- (a) Reduce Current ()
- (b) Improve appearance ()
- (c) **Prevent electric shock** ()
- (d) Reduce voltage ()

5. Which material is commonly used for insulation of electrician tools?

- (a) Iron ()
- (b) Copper ()
- (c) **Plastic/Rubber** ()
- (d) Aluminium ()

6. Proper earthing is recommended in National Electrical Code-2011 to:

- (a) Increase current ()
- (b) Reduce insulation ()
- (c) **Protect from electric shock** ()
- (d) Increase voltage ()

7. Which organization issues ISI certification?

- (a) NEC ()
- (b) **BIS** ()
- (c) PWD ()
- (d) BHEL ()

8. The National Electrical Code-2011 helps in:
- (a) Increasing electricity tariff ()
 - (b) Reducing wire resistance ()
 - (c) **Standardizing electrical practices** ()
 - (d) Manufacturing Electrical equipment ()
9. The specification of a tool mainly indicates:
- (a) Tool color ()
 - (b) Tool price ()
 - (c) **Size and capacity of the tool** ()
 - (d) Manufacturing location ()
10. Which one is a safety device in electrical installation?
- (a) **Fuse** ()
 - (b) Connector ()
 - (c) Switchboard ()
 - (d) Lamp holder ()
11. The SI unit of electric current is:
- (a) Volt ()
 - (b) Ohm ()
 - (c) **Ampere** ()
 - (d) Watt ()
12. The flow of electrons in a conductor is called:
- (a) Resistance ()
 - (b) Voltage ()
 - (c) **Electric current** ()
 - (d) Power ()
13. Which effect of electric current is used in an electric heater?
- (a) Chemical effect ()
 - (b) Magnetic effect ()
 - (c) **Heating effect** ()
 - (d) Lighting effect ()
14. Which material has the highest electrical conductivity?
- (a) Copper ()
 - (b) Aluminium ()
 - (c) **Silver** ()
 - (d) Iron ()
15. Why is copper commonly used for electrical wiring?
- (a) It is cheap only ()
 - (b) It has high resistance ()
 - (c) **It is a good conductor with high ductility** ()
 - (d) It is an insulator ()

16. Which of the following materials has higher resistance compared to copper?
- (a) Silver ()
 - (b) Aluminium ()
 - (c) **Nichrome** ()
 - (d) Gold ()
17. The magnetic effect of electric current is used in:
- (a) Electric iron ()
 - (b) **Electric motor** ()
 - (c) Electric heater ()
 - (d) Filament lamp ()
18. The unit of electric potential difference is:
- (a) Ohm ()
 - (b) Watt ()
 - (c) **Volt** ()
 - (d) Ampere ()
19. Which effect of electric current is used in an electric bell?
- (a) Heating effect ()
 - (b) Chemical effect ()
 - (c) **Magnetic effect** ()
 - (d) Lighting effect ()
20. Which conductor is lighter and cheaper than copper and widely used in overhead transmission lines?
- (a) Silver ()
 - (b) Gold ()
 - (c) **Aluminium** ()
 - (d) Nichrome ()
21. What is the main constituent of soft solder?
- (a) Copper and Zinc ()
 - (b) **Lead and Tin** ()
 - (c) Iron and Carbon ()
 - (d) Aluminium and Copper ()
22. Flux is used to:
- (a) Increase resistance ()
 - (b) **Clean metal surfaces** ()
 - (c) Reduce current ()
 - (d) Insulate conductors ()
23. Which joint is commonly used to extend the length of a conductor?
- (a) Tee Joint ()
 - (b) Britannia Joint ()
 - (c) **Straight Through Joint** ()
 - (d) Knotted Joint ()

24. The melting point of soft solder is generally:
- (a) **Below 450°C** ()
 - (b) Above 1000°C ()
 - (c) 800°C ()
 - (d) 1200°C ()
25. What happens if flux is not used during soldering?
- (a) Better soldering ()
 - (b) **Oxidation may prevent proper bonding** ()
 - (c) Lower temperature required ()
 - (d) Stronger joint is formed ()
26. Which flux is generally preferred for electronic circuits?
- (a) Acid flux ()
 - (b) **Rosin flux** ()
 - (c) Hydrochloric acid ()
 - (d) Zinc chloride only ()
27. Which of the following is NOT a characteristic of a good electrical joint?
- (a) Low contact resistance ()
 - (b) High mechanical strength ()
 - (c) Proper conductivity ()
 - (d) **Excessive heating during operation** ()
28. Acid-core flux is generally avoided in electronic circuits because it:
- (a) Increases conductivity ()
 - (b) **Causes corrosion** ()
 - (c) Reduces solder flow ()
 - (d) Increases insulation ()
29. The primary function of tin in soft solder is to:
- (a) Increase melting temperature ()
 - (b) **Improve wetting and bonding** ()
 - (c) Increase resistance ()
 - (d) Prevent current flow ()
30. A cold solder joint occurs when:
- (a) The solder is overheated ()
 - (b) **Insufficient heat is applied during soldering** ()
 - (c) Excess flux is used ()
 - (d) Copper wire is used ()
31. Underground cables are mainly used where:
- (a) **Overhead lines are not suitable** ()
 - (b) Voltage is zero ()
 - (c) Current is low ()
 - (d) Earthing is not required ()

32. Which instrument is commonly used to test insulation resistance of cables?
(a) Wattmeter ()
(b) **Megger** ()
(c) Ammeter ()
(d) Energy meter ()
33. PVC stands for:
(a) **Poly Vinyl Chloride** ()
(b) Poly Voltage Cable ()
(c) Plastic Voltage Conductor ()
(d) Power Voltage Cable ()
34. Which test is performed to determine the insulation condition of an underground cable?
(a) Open Circuit Test ()
(b) **Insulation Resistance Test** ()
(c) Load Test ()
(d) Temperature Test ()
35. Cables having voltage ratings up to 132 kV are classified as:
(a) **Extra High Voltage Cables** ()
(b) High Voltage Cables ()
(c) Low Voltage Cables ()
(d) Super Voltage Cables ()
36. Which type of cable is preferred for underground distribution systems?
(a) Bare conductor ()
(b) **PVC/XLPE insulated cable** ()
(c) GI wire ()
(d) Earth wire ()
37. What is the main advantage of using HTLS conductors in transmission lines?
(a) To reduce transmission voltage ()
(b) **To increase current carrying capacity without significant increase in sag** ()
(c) To eliminate the need for insulators ()
(d) To reduce conductor diameter ()
38. According to voltage grading, cables operating between 11 kV and 33 kV are classified as:
(a) Low Voltage Cables ()
(b) Medium Voltage Cables ()
(c) **High Voltage Cables** ()
(d) Super Tension Cables ()
39. The continuity test of a cable is carried out to check:
(a) **Conductor breakage** ()
(b) Voltage regulation ()
(c) Frequency variation ()
(d) Power factor ()

40. Which of the following tests is generally conducted after cable installation and before energizing?
- (a) **Insulation Resistance Test** ()
 - (b) Voltage Test ()
 - (c) Current Test ()
 - (d) Power Test ()
41. Resistance of a conductor depends upon:
- (a) Length ()
 - (b) Cross-sectional area ()
 - (c) Material ()
 - (d) **All of the above** ()
42. Which instrument is commonly used to measure medium resistance?
- (a) **Wheatstone Bridge** ()
 - (b) Ammeter ()
 - (c) Wattmeter ()
 - (d) Frequency meter ()
43. In a parallel circuit, the current through each resistor is:
- (a) **Different** ()
 - (b) Same ()
 - (c) Zero ()
 - (d) Double ()
44. Three resistors of 2 Ω , 3 Ω and 6 Ω are connected in parallel. Their equivalent resistance is:
- (a) **1 Ω** ()
 - (b) 11 Ω ()
 - (c) 6 Ω ()
 - (d) 3 Ω ()
45. At balance condition of Wheatstone Bridge:
- (a) Current flows through galvanometer ()
 - (b) Voltage is maximum ()
 - (c) **No current flows through galvanometer** ()
 - (d) Resistance becomes zero ()
46. Which resistor changes its value with temperature?
- (a) **Thermistor** ()
 - (b) Carbon resistor ()
 - (c) Wire wound resistor ()
 - (d) Fixed resistor ()
47. With rise in temperature, the resistance of metallic conductors generally:
- (a) Decreases ()
 - (b) **Increases** ()
 - (c) Remains constant ()
 - (d) Becomes zero ()

48. If $5\ \Omega$, $10\ \Omega$ and $15\ \Omega$ resistors are connected in series across $60\ \text{V}$ supply, the current drawn is:
- (a) $1\ \text{A}$ ()
 - (b) $2\ \text{A}$** ()
 - (c) $3\ \text{A}$ ()
 - (d) $4\ \text{A}$ ()
49. In a balanced Wheatstone Bridge, if $P = 20\ \Omega$, $Q = 10\ \Omega$ and $R = 40\ \Omega$, then S is:
- (a) $10\ \Omega$ ()
 - (b) $20\ \Omega$** ()
 - (c) $40\ \Omega$ ()
 - (d) $80\ \Omega$ ()
50. Which bridge is specifically designed for accurate measurement of very low resistance?
- (a) Wheatstone Bridge ()
 - (b) Schering Bridge ()
 - (c) Kelvin Double Bridge** ()
 - (d) Maxwell Bridge ()
51. The SI unit of magnetic flux is:
- (a) Weber** ()
 - (b) Tesla ()
 - (c) Henry ()
 - (d) Farad ()
52. Like poles of a magnet:
- (a) Attract each other ()
 - (b) Repel each other** ()
 - (c) Neutralize each other ()
 - (d) Produce current ()
53. The device used to store electric charge is called:
- (a) Resistor ()
 - (b) Inductor ()
 - (c) Capacitor** ()
 - (d) Transformer ()
54. According to Faraday's law, an EMF is induced when there is a change in:
- (a) Resistance ()
 - (b) Magnetic flux** ()
 - (c) Temperature ()
 - (d) Voltage ()
55. Which magnetic material has high permeability and low hysteresis loss?
- (a) Copper ()
 - (b) Soft Iron** ()
 - (c) Brass ()
 - (d) Nichrome ()

56. Two capacitors of $4\ \mu\text{F}$ and $6\ \mu\text{F}$ are connected in parallel. The total capacitance is:
- (a) $2.4\ \mu\text{F}$ ()
 - (b) $5\ \mu\text{F}$ ()
 - (c) $24\ \mu\text{F}$ ()
 - (d) **$10\ \mu\text{F}$** ()
57. Mutual induction is the basis of operation of:
- (a) **Transformer** ()
 - (b) Capacitor ()
 - (c) Rheostat ()
 - (d) Fuse ()
58. A coil has an inductance of $2\ \text{H}$. If the current changes at a rate of $5\ \text{A/s}$, the magnitude of induced EMF will be:
- (a) $2.5\ \text{V}$ ()
 - (b) $5\ \text{V}$ ()
 - (c) **$10\ \text{V}$** ()
 - (d) $20\ \text{V}$ ()
59. The capacitance of a capacitor is $20\ \mu\text{F}$ and the applied voltage is $100\ \text{V}$. The charge stored is:
- (a) **$0.002\ \text{C}$** ()
 - (b) $0.02\ \text{C}$ ()
 - (c) $2\ \text{C}$ ()
 - (d) $20\ \text{C}$ ()
60. The relative permeability of air is approximately:
- (a) 0 ()
 - (b) 0.5 ()
 - (c) **1** ()
 - (d) 100 ()
61. The frequency of AC supply in India is:
- (a) $25\ \text{Hz}$ ()
 - (b) **$50\ \text{Hz}$** ()
 - (c) $60\ \text{Hz}$ ()
 - (d) $100\ \text{Hz}$ ()
62. The unit of frequency is:
- (a) Volt ()
 - (b) **Hertz** ()
 - (c) Ohm ()
 - (d) Watt ()
63. Which quantity opposes the flow of AC current due to inductance?
- (a) Resistance ()
 - (b) Conductance ()
 - (c) **Inductive Reactance** ()
 - (d) Capacitance ()

64. The power factor of a purely resistive circuit is:
- (a) 0 ()
 - (b) 0.5 ()
 - (c) **1** ()
 - (d) 2 ()
65. Which system is commonly used for domestic power supply?
- (a) **Single-phase** ()
 - (b) Three-phase ()
 - (c) Six-phase ()
 - (d) DC system ()
66. The waveform of AC voltage is generally:
- (a) Square Wave ()
 - (b) Triangular Wave ()
 - (c) **Sine Wave** ()
 - (d) Saw Tooth Wave ()
67. Which instrument is used to improve power factor?
- (a) Resistor ()
 - (b) **Capacitor** ()
 - (c) Fuse ()
 - (d) Relay ()
68. One major advantage of AC over DC is:
- (a) Cannot be transformed ()
 - (b) **Easy voltage transformation** ()
 - (c) Higher conductor size required ()
 - (d) More transmission losses ()
69. In a healthy balanced three-phase system, the phase difference between any two phases is:
- (a) 60° ()
 - (b) 90° ()
 - (c) **120°** ()
 - (d) 180° ()
70. Which type of current changes its direction periodically?
- (a) Direct Current (DC) ()
 - (b) **Alternating Current (AC)** ()
 - (c) Battery Current ()
 - (d) Solar Current ()
71. Which system is generally used for transmission of electrical power?
- (a) Single-phase AC ()
 - (b) **Three-phase AC** ()
 - (c) DC only ()
 - (d) Two-phase AC ()

72. In a capacitor, current _____ voltage.
- (a) lags ()
 - (b) leads** ()
 - (c) equals ()
 - (d) opposes ()
73. The unit of power factor is:
- (a) Watt ()
 - (b) Volt ()
 - (c) No unit** ()
 - (d) Ohm ()
74. Why are transmission lines operated using AC rather than DC in conventional power systems?
- (a) AC cannot be transformed ()
 - (b) AC voltage can be stepped up and down easily** ()
 - (c) DC has higher losses ()
 - (d) DC requires thicker conductors ()
75. Why is three-phase power preferred for industrial motors?
- (a) Higher efficiency ()
 - (b) Self-starting and smooth operation** ()
 - (c) Requires less conductor material ()
 - (d) Produces pulsating torque ()
76. The process of chemical decomposition by electric current is called:
- (a) Electrolysis** ()
 - (b) Magnetization ()
 - (c) Induction ()
 - (d) Rectification ()
77. The electrode connected to the positive terminal in an electrolytic cell is called:
- (a) Cathode ()
 - (b) Anode** ()
 - (c) Grid ()
 - (d) Plate ()
78. Faraday's laws are related to:
- (a) Electrolysis** ()
 - (b) Capacitance ()
 - (c) Resistance ()
 - (d) AC circuits ()
79. The nominal voltage of one lead-acid cell is:
- (a) 1 V ()
 - (b) 1.5 V ()
 - (c) 2 V** ()
 - (d) 12 V ()

80. A 12 V lead-acid battery consists of:
- (a) 4 Cells ()
 - (b) 5 Cells ()
 - (c) **6 Cells** ()
 - (d) 12 Cells ()
81. Which battery is commonly used in automobiles?
- (a) Dry Cell ()
 - (b) **Lead-Acid Battery** ()
 - (c) Fuel Cell ()
 - (d) Solar Cell ()
82. Distilled water is added to a battery to:
- (a) Increase voltage ()
 - (b) **Replace water lost during charging** ()
 - (c) Increase current ()
 - (d) Reduce resistance ()
83. Solar cells convert:
- (a) Heat Energy into Mechanical Energy ()
 - (b) **Light Energy into Electrical Energy** ()
 - (c) Electrical Energy into Light Energy ()
 - (d) Chemical Energy into Heat Energy ()
84. The main material used in solar cells is:
- (a) Copper ()
 - (b) Aluminium ()
 - (c) **Silicon** ()
 - (d) Iron ()
85. Which of the following is an advantage of a solar cell?
- (a) Produces pollution ()
 - (b) Requires fuel ()
 - (c) **Renewable source of energy** ()
 - (d) Generates AC directly ()
86. Which of the following is a rechargeable cell?
- (a) Dry Cell ()
 - (b) **Lead-Acid Cell** ()
 - (c) Zinc-Carbon Cell ()
 - (d) Leclanche Cell ()
87. When cells are connected in parallel, the:
- (a) Voltage increases ()
 - (b) **Current capacity increases** ()
 - (c) EMF becomes zero ()
 - (d) Frequency increases ()

88. Which charging method is widely used for automobile batteries?

- (a) **Constant Voltage Charging** ()
- (b) Reverse Charging ()
- (c) Pulse Charging ()
- (d) Manual Charging ()

89. Electroplating is used to:

- (a) Increase conductor resistance ()
- (b) **Coat one metal with another metal** ()
- (c) Produce AC ()
- (d) Store energy ()

90. Solar cells generate which type of electrical output?

- (a) Alternating Current (AC) ()
- (b) **Direct Current (DC)** ()
- (c) Both AC and DC ()
- (d) Three-phase AC ()

91. The main purpose of electrical wiring is to:

- (a) Generate electricity ()
- (b) **Transmit electrical energy safely to loads** ()
- (c) Increase voltage ()
- (d) Store electrical energy ()

92. Which device is used to manually open or close an electrical circuit?

- (a) Relay ()
- (b) Fuse ()
- (c) **Switch** ()
- (d) Capacitor ()

93. The earth wire is generally identified by:

- (a) Red color ()
- (b) Blue color ()
- (c) **Green/Green-Yellow color** ()
- (d) Black color ()

94. MCB stands for:

- (a) Main Control Board ()
- (b) Mini Circuit Breaker ()
- (c) **Miniature Circuit Breaker** ()
- (d) Main Circuit Box ()

95. ELCB stands for:

- (a) **Earth Leakage Circuit Breaker** ()
- (b) Electric Load Circuit Breaker ()
- (c) Earth Line Control Board ()
- (d) Electrical Leakage Control Box ()

96. MCCB stands for:

- (a) Main Current Circuit Breaker ()
- (b) Molded Case Circuit Breaker** ()
- (c) Motor Control Circuit Breaker ()
- (d) Multiple Circuit Control Board ()

97. Compared to an MCB, an MCCB is generally used for:

- (a) Lower current ratings ()
- (b) Higher current ratings** ()
- (c) Measuring voltage ()
- (d) Earthing protection only ()

98. Voltage drop in a conductor increases with:

- (a) Decrease in current ()
- (b) Increase in conductor size ()
- (c) Increase in length of conductor** ()
- (d) Increase in insulation thickness ()

99. Current carrying capacity of a cable mainly depends on:

- (a) Conductor size ()
- (b) Insulation type ()
- (c) Ambient temperature ()
- (d) All of the above** ()

100. Cable grading refers to:

- (a) Color of cable ()
- (b) Voltage rating of cable insulation** ()
- (c) Weight of cable ()
- (d) Length of cable ()

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