

# Electrician Domestic Solution

## Question Bank

### 1. PSS/N6001: Types of House Wiring and Fault Repair in house Wiring

#### Theory Questions:

- Rated frequency in India is
  - 60 Hz
  - 50 Hz
  - 55 Hz
  - 53 Hz
- Ohm's Law states that
  - $I=VR$
  - $V=IR$
  - $R=VI$
  - All of the above
- The SI unit of Current is
  - Ampere
  - Volts
  - Ohm
  - Farad
- Standard color code for neutral wire is
  - Red
  - Black
  - Green
  - Yellow
- Voltage level to the end consumer is
  - 260/460 V
  - 110/240 V
  - 310/350 V
  - 240/415 V
- The power consumed over a period of time can be measured by
  - Energy meter
  - Wattmeter
  - Multimeter
  - Galvanometer
- A multimeter is a device which can measure
  - Resistance
  - Voltage
  - Current

- d) All of the above
8. Determining causes of operating errors and deciding what should be done to rectify the errors is called
- a) Repairing
  - b) Installation
  - c) Troubleshooting
  - d) Equipment selection
9. Apparent power is measured in terms of
- a) VA
  - b) V
  - c) A
  - d) Watt
10. The system that supplies power to consumers at voltages of 415 volts and/or 240 volts three phase or single phase respectively is known as
- a) Secondary distribution system
  - b) Primary distribution system
  - c) Secondary transmission system
  - d) Primary transmission system
11. The ratio of the real power flowing to the load to the apparent power in the circuit is known as
- a) Maximum demand
  - b) Power factor
  - c) Load factor
  - d) None of the above
12. Voltage rating of incoming supply for domestic use is
- a)  $240\text{ V} \pm 10\%$
  - b)  $240\text{ V} \pm 5\%$
  - c)  $240\text{ V} \pm 15\%$
  - d)  $240\text{ V} \pm 8\%$
13. Unit of capacitance is
- a) Henry
  - b) Ohm
  - c) Farad
  - d) Watt
14. The circuit in which the current through each of the resistor or components is the same
- a) Parallel circuit
  - b) Series circuit
  - c) Open circuit
  - d) Closed circuit
15. Technical skill of electrician domestic solution includes
- a) Critical thinking
  - b) Decision making
  - c) Active listening

- d) Installing
16. Behavioral skill of electrician domestic solution includes
- a) Instructing
  - b) Speaking/communication
  - c) Operation and control
  - d) Equipment selection
17. According to standard color code, \_\_\_\_\_ color is used for live wire
- a) Black
  - b) Green
  - c) Red
  - d) Any of the above
18. The tool used to tighten and loosen the screws is known as
- a) Hammer
  - b) Screwdriver
  - c) Phase tester
  - d) Combination plier
19. Fuse is a piece of wire of a material with
- a) High melting point
  - b) Low melting point
  - c) Moderate melting point
  - d) None of the above
20. One commercial unit of energy equals
- a) 500 watt-sec
  - b) One watt-hour
  - c) One kilowatt-hour
  - d) Ten kilowatt-hour
21. For 230 V AC incoming supply to residential area, the permissible maximum loading condition is
- a) 7.5 kW
  - b) 15 kW
  - c) 17.5 kW
  - d) 25 kW
22. Earthing is necessary to give protection against
- a) Electric shock
  - b) Voltage fluctuation
  - c) Overloading
  - d) High temperature of the conductors
23. According to house wiring rules as per ISI specification, the switchboard should be fitted at a height of
- a) 0.5 m
  - b) 1.5 m
  - c) 2.5 m
  - d) 3.5 m

24. The tool used for cutting, removing insulation, jointing and twisting the electric wires and cables even on Live line is
- Hammer
  - Nose plier
  - Screwdriver
  - Combination plier
25. As per ISI specification minimum size of earth wire for light circuit is \_\_\_\_\_ for copper and \_\_\_\_\_ for aluminium
- 1 mm<sup>2</sup> and 1.5 mm<sup>2</sup> respectively
  - 1.5 mm<sup>2</sup> and 1 mm<sup>2</sup> respectively
  - 2 mm<sup>2</sup> and 1.5 mm<sup>2</sup> respectively
  - 1.5 mm<sup>2</sup> and 2 mm<sup>2</sup> respectively
26. The fuse rating is usually defined in
- Ampere
  - kilowatt
  - VA
  - All of the above
27. RCDs for protecting people have a rated tripping current (sensitivity) of not more than
- 40 mA
  - 50 mA
  - 30 mA
  - 60 mA
28. Water heaters exceeding 3 kW shall be permanently connected to a \_\_\_\_\_ rated circuit breaker or fuse with an isolator switch and residual current device
- 20A/30A
  - 5A/10A
  - 10A/12A
  - None of the above
29. Which distribution system is more reliable?
- Ring main system
  - Tree system
  - Radial system
  - All are equally reliable
30. Planning of electrical wiring work includes
- Site visit
  - Determining the customer load requirement
  - Calculating the maximum load demand
  - All of the above
31. The electrical circuit in which if one of the path is broken, none of the load devices will work
- Parallel circuit
  - Series circuit
  - Series-parallel circuit

- d) None of the above
32. Unit of Reactive Power, Active Power and Apparent Power respectively are
- a) W, VAR and VA
  - b) VA, VAR and W
  - c) W, VA and VAR
  - d) VAR, W and VA
33. Fuse wire should be connected to
- a) Phase wire only
  - b) Neutral wire only
  - c) Ground wire only
  - d) Both (b) and (c)
34. If 2 switches are connected in series to a lamp/load, then
- a) Any one switch need to be switched ON to energize the load
  - b) Both the switches need to be switched ON to energize the load
  - c) Only switch 1 need to be switched ON to energize the load
  - d) Only switch 2 need to be switched ON to energize the load
35. The method to interconnect a switch, a fan and a fan regulator to an electric supply is
- a) Connecting each of them in parallel to one another
  - b) Connecting each of them in series to one another
  - c) Connecting fan and regulator in parallel and switch in series to them
  - d) Connecting fan and regulator in series and switch in parallel to them
36. The device used for protection from earth leakage current to prevent electric shocks is
- a) Fuse
  - b) Circuit breaker
  - c) Residual current device
  - d) All of the above
37. The device that are encouraged to be used for protection against heavy lightning strikes or over voltage is
- a) Surge protection device
  - b) Residual current device
  - c) Both (a) and (b)
  - d) Either (a) or (b)
38. The test done to check the healthiness of the domestic wiring is
- a) Polarity test
  - b) Insulation resistance test
  - c) Continuity test
  - d) All of the above
39. Fluorescent lamps using electronic ballast or high frequency electronic ballasts
- a) Do not need capacitors
  - b) Need capacitors
  - c) Either (a) or (b)
  - d) None of the above

40. For 4 core cable, the cable color for phase conductor is
- Green
  - Green-yellow
  - Black
  - Blue
41. For extremely low voltage circuit receiving supply from an isolating transformer, the minimum insulation resistance should be
- 0.25 mega ohms
  - 0.5 mega ohms
  - 0.1 mega ohms
  - 0.15 mega ohms

### **Viva Questions:**

1. What are the standard color codes for phase, neutral and earth wire?
2. Mention the application of Series and Parallel circuits.
3. What are the importance of wiring diagrams and symbols?
4. Name the tools carried by electricians.
5. What are the steps for planning electrical wiring work?
6. Mention the criteria for selection of wiring cables.

### **OJT Questions:**

1. Perform insulation resistance test on cables.
2. Locate fault in the domestic wiring or cables.
3. Perform polarity test to ensure each fuse or single pole control and protection device is connected only in the phase conductor.

## **2. PSS/N 6002: Mains, Distribution, Control, Circuits and Protection in House Wiring**

42. Earth Leakage Circuit Breaker (ELCB) is
- Voltage operated protection
  - Current operated protection
  - Both (a) and (b)
  - None of the above
43. In case of short circuit, \_\_\_\_\_ current will flow in the circuit
- Zero
  - Very low
  - Normal
  - Very high current

44. If a 100 Watts bulb ON for 10 hours, then what will be the amount of consumed electricity
- a) 100 Watts per hour
  - b) 100 Watts
  - c) 1kWh
  - d) 1000 Watts
45. The insulation resistance of an electrical system is measured using an instrument called
- a) Clamp on meter
  - b) Multimeter
  - c) Megger
  - d) Wattmeter
46. The service mains connects
- a) Distributor and consumer terminals
  - b) Distributor and transformer
  - c) Distributor and relay system
  - d) Transformer and earth
47. The most preferred domestic wiring nowadays is
- a) Casing and capping wiring
  - b) Conduit wiring
  - c) Cleat wiring
  - d) Batten wiring
48. The method used by domestic electrician for checking the continuity in domestic wiring is
- a) Bulb test/lamp test
  - b) Neon tester
  - c) Residual current device test
  - d) Prospective short circuit test
49. The basic needs of earthing is
- a) To protect human lives as well as provide safety to electrical devices and appliances from leakage current
  - b) To protect electric system and buildings from lightning
  - c) To serve as a return conductor in electric traction system and communication
  - d) All of the above
50. A \_\_\_\_\_ is where the electrical supply is distributed from within the building
- a) Switch board
  - b) Distribution board
  - c) Service lines
  - d) All of the above
51. The device that consists of short length of wire, generally of tinned copper is
- a) HRC fuse
  - b) Cartridge fuse
  - c) Re-wirable fuse
  - d) All of the above

### Viva Questions:

7. Explain the procedure for preventing an overload or a short circuit in a domestic wiring.
8. What are the types of Domestic Wiring?
9. What are the advantages and Disadvantages of using Conduit wiring?
10. Mention few house wiring rules as per ISI specification.
11. What are the protection devices used for domestic circuits?
12. What are the different types of earthing methods?

### OJT Questions:

4. Connect the service cable to the distributing mains.
5. Conduct a test to measure earth resistance.

### 3. PSS/ N 6003 Maintenance & Repair of house hold electrical gadgets

52. The part of the motor that is mounted on the shaft, support the rotor and allow it to turn is
  - a) Stator
  - b) Terminal box
  - c) Enclosure
  - d) Bearings
53. Split phase induction motor have \_\_\_\_\_ starting current and \_\_\_\_\_ starting torque
  - a) Low, moderate respectively
  - b) High, low respectively
  - c) Moderate, low respectively
  - d) High, high respectively
54. The running winding of the capacitor start capacitor run induction motor is
  - a) Resistive in nature
  - b) Capacitive in nature
  - c) Inductive in nature
  - d) All of the above
55. The single phase induction motor is not self-starting because the magnetic field produced is
  - a) Rotating type
  - b) Not rotating type
  - c) Sometimes rotating type and sometimes not rotating types
  - d) None of the above
56. The part of the motor that protects the internal components from moisture and contamination is
  - a) Stator
  - b) Terminal box
  - c) Enclosure



- d) Bearings
57. A universal motor can work on
- a) AC
  - b) DC
  - c) AC and DC
  - d) None of the above
58. A compensating winding is used for \_\_\_\_\_ the effect of the armature reaction and \_\_\_\_\_ the commutation process
- a) Improving, reducing respectively
  - b) Improving, improving respectively
  - c) Reducing, reducing respectively
  - d) Reducing, improving respectively
59. In DC series motor, to get the required torque the number of conductor in the armature is
- a) Decreased
  - b) Increased
  - c) Remains same
  - d) None of the above
60. The stator core and yoke are laminated to reduce
- a) Eddy current loss
  - b) Hysteresis loss
  - c) Both (a) and (b)
  - d) None of the above
61. The purpose of centrifugal switch is to disconnect the auxiliary winding from the main circuit when the motor attains a speed up to
- a) 50% to 60%
  - b) 75% to 80%
  - c) 90% to 100%
  - d) 20% to 30%
62. In a split phase AC motor the resultant of two starting winding and running winding produces
- a) Rotating magnetic field
  - b) Static magnetic field
  - c) Electromagnetic field
  - d) None of the above
63. Centrifugal switch is not required in
- a) Split phase induction motor
  - b) Capacitor start induction motor
  - c) Permanent split capacitor motor
  - d) None of the above
64. The efficiency of universal motor becomes low because of
- a) Hysteresis loss
  - b) Eddy current loss
  - c) Both (a) and (b)

- d) All of the above
65. The choice of bearing arrangement is based on
- Load carrying capacity in the axial and radial direction
  - Over speed and duration
  - Rotating speed
  - All of the above
66. The speed of \_\_\_\_\_ connected motor are high
- Delta
  - Star
  - Both (a) and (b)
  - None of the above
67. The winding in which the end of one coil is connected to the starting of another coil of same polarity as that of the first coil is
- Lap winding
  - Wave winding
  - Duplex winding
  - All of the above
68. The device that converts chemical energy to electrical energy is known as
- Battery
  - Motor
  - Generator
  - All of the above
69. In an alkaline battery cell, the powdered zinc serves as \_\_\_\_\_, manganese dioxide serves as \_\_\_\_\_ and potassium hydroxide serves as \_\_\_\_\_
- Cathode, anode and electrolyte respectively
  - Anode, cathode and electrolyte respectively
  - Electrolyte, cathode and anode respectively
  - Cathode, electrolyte and anode respectively
70. How much supply is fed to the heating element of ordinary electric iron through a switch
- 415 V AC
  - 415 V DC
  - 230 V AC
  - 230 V DC
71. Which of the following method is/are used for reactive or voltage compensation
- Shunt capacitor
  - Series capacitor
  - Generating excitation control
  - All of the above
72. During maintenance activity of tripping device the sequence for maintenance to be followed is
- Review current carrying capacity and maximum demand → check for over-current requirements → determine the voltage drop based on cabling and current being carried

- b) Determine the voltage drop based on cabling and current being carried → Review current carrying capacity and maximum demand → check for over-current requirements
  - c) Review current carrying capacity and maximum demand → determine the voltage drop based on cabling and current being carried → check for over-current requirements
  - d) None of the above
73. The main function of the rectifier is to convert
- a) AC supply to DC supply
  - b) DC supply to AC supply
  - c) DC supply to DC supply
  - d) AC supply to AC supply
74. In capacitor start induction motor the phase difference is created by using
- a) Resistance
  - b) Capacitor
  - c) Inductor
  - d) All of the above
75. In capacitor start induction motor, with starting winding a capacitor is connected so the current flowing in the capacitor \_\_\_\_\_ the applied voltage by some angle  $\phi$
- a) Leads
  - b) Lags
  - c) Remains same
  - d) None

#### **Viva Questions:**

13. Which test is conducted to determine the healthiness of the domestic wiring?
14. Name the instrument used for measurement of insulation resistance.
15. What are the materials used for manufacturing heating element?
16. Mention functions of various parts of motors and pumps.

#### **OJT Questions:**

6. Troubleshoot and repair a faulty motor.
7. Perform maintenance and repair of Electric iron, kettle, hot plate and Induction.
8. Perform maintenance and repair of Electric geyser, room heater, heat convector and hair dryer
9. Perform maintenance and repair of ceiling fan, cooler, exhaust fan and water pump.
10. Solder the winding wires.
11. Perform maintenance activity on solar panel.
12. Check cell voltage and specific gravity of battery cells.

#### **4. PSS/N 6004 Entrepreneurship & PSS/N6005 Customer relationship skills**

76. The power generating equipment that uses non-conventional energy source is

- a) Diesel Generator
  - b) Solar panel
  - c) Thermal power plant
  - d) All of the above
77. \_\_\_\_\_ means refusing to quit until the designated work is done, and completing the work at the highest possible level of excellence
- a) Professionalism
  - b) Dedication
  - c) Humility
  - d) Dependability
78. \_\_\_\_\_ means acknowledging everyone's efforts and hard work, and sharing the credit for accomplishments
- a) Professionalism
  - b) Dedication
  - c) Humility
  - d) Dependability
79. Turning an idea into a solution that adds value is known as
- a) Innovation
  - b) Efficiency
  - c) Reliability
  - d) Good work habits
80. The bank accounts that is ideal for those who wish to deposit their saving for a long term in return for a high rate of interest
- a) Current accounts
  - b) Saving accounts
  - c) Recurring Deposit accounts
  - d) Fixed Deposit accounts
81. \_\_\_\_\_ are professionally managed financial instruments that invest money in different securities on behalf of investors
- a) Stocks
  - b) Venture Capital
  - c) Mutual Funds
  - d) Fixed Deposit

## **5. PSS/ N 2001 Use basic health and safety practices as the workplace**

82. Accident at workplace can be caused by working on unsafe or dangerous equipment such as
- a) Cleaning/greasing or adjusting any of running machine
  - b) Working on machine under off condition
  - c) Using insulated tools
  - d) None of the above
83. Basic fundamental of safety are

- a) Cooperation of all co-workers is essential to avoid accident
  - b) Accident is the result of unsafe working condition and unsafe work
  - c) Use of incomplete or little knowledge is dangerous and may invite accident
  - d) All of the above
84. Hazards occur due to
- a) Inadequate wiring
  - b) Exposed electrical ports
  - c) Wires with bad insulation
  - d) All of the above
85. Tool used on electrical apparatus or equipment should be properly
- a) Insulated
  - b) Not insulated
  - c) Both (a) and (b)
  - d) None of the above
86. The device that allow electrically operated equipment to be connected to the primary AC power supply in a building
- a) MCB
  - b) Plug and socket
  - c) ELCB
  - d) Fuse
87. Safety requirement applicable at work include.
- a) Wear personal protective equipment
  - b) Use tools in proper manner
  - c) Both (a) and (b)
  - d) None
88. CO<sub>2</sub> fire extinguisher are designed for
- a) Class B only
  - b) Class B and C
  - c) Class C only
  - d) None of the above
89. Class A type of fire extinguisher are used to extinguish fire on
- a) Solid that is not metal
  - b) Flammable liquid
  - c) Flammable gas
  - d) Metals
90. First-aid box contains
- a) Clean and sterilized cotton pads
  - b) Three angle bandage
  - c) Bottle of Dettol or Savlon liquid
  - d) All of the above
91. Mouth to mouth procedure of artificial respiration should be repeated about
- a) 10 to 12 times in a min
  - b) 30 to 32 times in a min
  - c) 50 to 52 times in a min

- d) 1 to 2 times in a min
- 92. The undertakings shall provide suitable hoisting apparatus for hauling and carriage of loads above
  - a) 500kg
  - b) 50 kg
  - c) 5 kg
  - d) 10 kg
- 93. The workmen shall be trained in safe methods of handling. They shall avoid
  - a) Lifting too quickly and with a jerk
  - b) Lifting while in an awkward position or with a poor footing
  - c) Handling loads which are unwieldy or too heavy or loads which obstruct vision
  - d) All the above

**OJT Questions:**

- 13. Demonstrate the use of PPE with practical applications.

**6. PSS/ N 1336 Work effectively with others**

- 94. Things needed to succeed in a team player
  - a) Recognize your role
  - b) Take ownership of the team goal
  - c) Earn trust
  - d) All the above
- 95. Characteristics of disciplined behavior
  - a) Punctual
  - b) Maintain work standard
  - c) Both a & b
  - d) None of the above
- 96. Leadership skills includes
  - a) Problem-solving
  - b) Decision-making
  - c) Personal stress management
  - d) All of the above
- 97. Conflict can be resolved by
  - a) Being anguished
  - b) Being calm and listening views
  - c) Negative body language
  - d) All of the above
- 98. Methods to develop positive attitude include
  - a) Make failure a teacher
  - b) Keep Complaining

- c) Not to forgive others
  - d) None of the above
99. What are the ways to build self- confidence?
- a) Identify the problem
  - b) Don't fear mistake
  - c) Look on the bright side
  - d) All the above
100. What are the tips to deal with change?
- b) Stay prepared
  - c) Understand and accept change
  - d) View change as an opportunity
  - e) All the above