JNANAPEETA DCET ACADEMY

3. PROCTIVE DEVICES AND WIRING CIRCUITS

1. What does HRC stand for in HRC fuse?

a) High Resistance Connection

b) High Retaining Current

c) High Rupturing Capacity

d) High Rated Control

Answer: c) High Rupturing Capacity

2. Which of the following is a characteristic of an HRC fuse?

a) Can be reset after tripping

b) Protects against overload and short circuits

c) Contains a replaceable fuse wire

d) Provides protection against electric shock

Answer: b) Protects against overload and short circuits

3. A kit kat fuse is primarily used in:

a) Residential buildings

b) Industrial facilities

c) Commercial establishments

d) Outdoor lighting systems

Answer: a) Residential buildings

4. Which protective device can be described as a miniature circuit breaker?

a) MCB (Miniature Circuit Breaker)

b) MCCB (Molded Case Circuit Breaker)

c) ELCB (Earth Leakage Circuit Breaker)

d) Relay

Answer: a) MCB (Miniature Circuit Breaker)

5. What is the primary function of an ELCB (Earth Leakage Circuit Breaker)?

a) To regulate voltage

b) To protect against overload and short circuits

c) To provide electrical isolation and reduce the risk of electric shock

d) To detect leakage of current to the earth and trip the circuit

Answer: d) To detect leakage of current to the earth and trip the circuit

6. Which protective device is commonly used in motor control circuits to protect against overload?

a) HRC fuse

b) Kit kat fuse

c) MCB

d) Relay

Answer: d) Relay

7. Which of the following protective devices is commonly used for high-power applications?

a) HRC fuse

b) Kit kat fuse

c) MCB

d) MCCB (Molded Case Circuit Breaker)

Answer: d) MCCB (Molded Case Circuit Breaker)

8. Which tool is used to strip insulation from electrical wires?

a) Screwdriver

b) Pliers

c) Wire stripper

d) Crimping tool

Answer: c) Wire stripper

9. Which tool is used to twist together the ends of electrical wires for secure connections?

a) Screwdriver

b) Pliers

c) Wire stripper

d) Wire nut

Answer: b) Pliers

10. Which tool is used to tighten or loosen screws on electrical terminals?

a) Screwdriver

b) Pliers

c) Wire stripper

d) Crimping tool

Answer: a) Screwdriver

11. Which tool is used to crimp connectors onto the ends of electrical wires?

a) Screwdriver

b) Pliers

c) Wire stripper

d) Crimping tool

Answer: d) Crimping tool

12. Which tool is used to measure electrical voltage, current, and resistance?

a) Screwdriver

b) Pliers

c) Multimeter

d) Wire nut

Answer: c) Multimeter

13. Which type of wiring system is commonly used for surface-mounted electrical installations?

a) Conduit wiring

b) PVC casing capping

c) Concealed conduit wiring

d) Busbar trunking system

Answer: b) PVC casing capping

14. What is the purpose of a surface conduit wiring system?

a) To provide mechanical protection to electrical wires

b) To provide electrical insulation to electrical wires

c) To facilitate easy installation and maintenance of electrical wiring

d) To regulate voltage fluctuations in electrical circuits

Answer: c) To facilitate easy installation and maintenance of electrical wiring

15. Which type of wiring system is commonly used for concealed electrical installations?

a) Conduit wiring

b) PVC casing capping

c) Surface conduit wiring

d) Busbar trunking system

Answer: a) Conduit wiring

16. What is the purpose of a concealed conduit wiring system?

a) To provide mechanical protection to electrical wires

b) To provide electrical insulation to electrical wires

c) To facilitate easy installation and maintenance of electrical wiring

d) To regulate voltage fluctuations in electrical circuits

Answer: a) To provide mechanical protection to electrical wires

17. Which type of wiring system is commonly used in industrial buildings and large commercial establishments?

a) Conduit wiring

b) PVC casing capping

c) Surface conduit wiring

d) Busbar trunking system

Answer: d) Busbar trunking system

18. What is the primary advantage of a busbar trunking system?

a) Easy installation and modification of electrical circuits

b) Cost-effective wiring solution

c) Enhanced electrical insulation properties

d) Greater protection against electrical faults

Answer: a) Easy installation and modification of electrical circuits

19. Which wiring system is most suitable for temporary electrical installations, such as construction sites or events?

a) Conduit wiring

b) PVC casing capping

c) Surface conduit wiring

d) Flexible cord wiring

Answer: d) Flexible cord wiring

20. What is the purpose of flexible cord wiring?

a) To provide mechanical protection to electrical wires

b) To provide electrical insulation to electrical wires

c) To facilitate easy installation and maintenance of electrical wiring

d) To allow for flexible connections and temporary installations

Answer: d) To allow for flexible connections and temporary installation

21. Which type of wire is commonly used for electrical wiring in buildings and homes?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) Nichrome wire

Answer: b) Stranded copper wire

22. Which type of wire is known for its high conductivity and low resistance?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) Nichrome wire

Answer: a) Solid copper wire

23. Which type of wire is commonly used for electrical transmission and distribution?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) Nichrome wire

Answer: c) Aluminum wire

24. Which type of wire is commonly used for heating elements in appliances?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) Nichrome wire

Answer: d) Nichrome wire

25. Which type of wire is known for its high resistance and is used in applications requiring controlled heating?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) Nichrome wire

Answer: d) Nichrome wire

JNANAPEETA DCET ACADEMY

26. Which type of wire is commonly used for underground electrical installations?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) Direct burial wire

Answer: d) Direct burial wire

27. Which type of wire is suitable for high-temperature applications, such as ovens and furnaces?

a) Solid copper wire

b) Stranded copper wire

c) Aluminum wire

d) High-temperature wire

Answer: d) High-temperature wire

28. Which type of wire is commonly used for low-voltage signaling and control circuits?

a) Solid copper wire

b) Stranded copper wire

c) Shielded wire

d) Twisted pair wire

Answer: c) Shielded wire

29. Which type of wire is commonly used for Ethernet networking?

a) Solid copper wire

b) Stranded copper wire

c) Shielded wire

d) Twisted pair wire

Answer: d) Twisted pair wire

30. Which type of wire is commonly used for speaker connections and audio applications?

a) Solid copper wire

b) Stranded copper wire

c) Shielded wire

d) Twisted pair wire

Answer: b) Stranded copper wire

31. Why are protective devices necessary in electrical circuits?

a) To regulate voltage levels

b) To control power consumption

c) To protect against electrical faults and hazards

d) To increase the efficiency of electrical systems

Answer: c) To protect against electrical faults and hazards

32. Which of the following is a function of a fuse in an electrical circuit?

a) To regulate voltage levels

b) To control power consumption

c) To provide electrical insulation

d) To protect against overcurrent and short circuits

Answer: d) To protect against overcurrent and short circuits

33. What is the primary function of a circuit breaker?

a) To regulate voltage levels

b) To control power consumption

c) To provide electrical insulation

d) To protect against overcurrent and short circuits

Answer: d) To protect against overcurrent and short circuits

34. Which protective device is designed to detect ground faults and provide protection against electric shock?

a) Fuse

b) Circuit breaker

c) Residual Current Device (RCD)

d) Surge protector

Answer: c) Residual Current Device (RCD)

35. What is the function of an isolator switch in an electrical circuit?

a) To regulate voltage levels

b) To control power consumption

c) To provide electrical insulation

d) To isolate a circuit from the power supply for maintenance or repairs

Answer: d) To isolate a circuit from the power supply for maintenance or repairs

36. Which protective device is commonly used to protect electrical appliances from voltage fluctuations?

a) Fuse

b) Circuit breaker

c) Voltage stabilizer

d) Surge protector

Answer: c) Voltage stabilizer

37. Which protective device is used to protect electrical circuits from overvoltage caused by lightning or power surges?

a) Fuse

b) Circuit breaker

c) Voltage stabilizer

d) Surge protector

Answer: d) Surge protector

38. What is the purpose of a ground fault circuit interrupter (GFCI)?

a) To regulate voltage levels

b) To control power consumption

c) To provide electrical insulation

d) To protect against ground faults and electric shock

Answer: d) To protect against ground faults and electric shock

39. Which protective device is commonly used in motor control circuits to protect against overload?

a) Fuse

b) Circuit breaker

c) Overload relay

d) Surge protector

Answer: c) Overload relay

40. Which protective device is commonly used to protect sensitive electronic equipment from voltage spikes and surges?

a) Fuse

b) Circuit breaker

c) Voltage stabilizer

d) Surge protector

Answer: d) Surge protector

41. What is the function of a fuse wire in a fuse?

a) To provide mechanical support

b) To provide electrical insulation

c) To carry the electrical current

d) To melt and break the circuit in case of an overcurrent

Answer: d) To melt and break the circuit in case of an overcurrent

42. Fuse wire is made of which material?

a) Copper

b) Aluminum

c) Silver

d) Tin

Answer: c) Silver

43. What determines the current rating of a fuse wire?

a)The diameter or thickness of wire

b) The length of the wire

c) The material composition of the wire

d) The shape or configuration of the wire

Answer: a) The diameter or thickness of the wire

44. Which of the following is an advantage of a cartridge-type fuse over a rewirable fuse?

a) Cartridge-type fuses are cheaper

b) Cartridge-type fuses are easier to replace

c) Cartridge-type fuses provide better protection

d) Cartridge-type fuses can be reset after tripping

Answer: c) Cartridge-type fuses provide better protection

45. Which type of fuse wire is commonly used in household electrical installations?

a) Lead fuse wire

b) Aluminum fuse wire

c) Silver fuse wire

d) Copper fuse wire

Answer: c) Silver fuse wire

JNANAPEETA DCET ACADEMY

46. What is the primary advantage of using a fuse in an electrical circuit?

a) Fuses are inexpensive

b) Fuses provide better protection than circuit breakers

c) Fuses are easier to replace than circuit breakers

d) Fuses are more reliable than circuit breakers

Answer: a) Fuses are inexpensive

47. How does a fuse protect an electrical circuit?

a) By opening the circuit when excessive current flows through it

b) By regulating the voltage in the circuit

c) By reducing the power consumption in the circuit

d) By isolating the circuit from the power supply

Answer: a) By opening the circuit when excessive current flows through it

48. Which of the following is a disadvantage of using a fuse in an electrical circuit?

a) Fuses are difficult to replace

b) Fuses have a limited lifespan

c) Fuses are bulky and take up more space

d) Fuses are prone to false tripping

Answer: b) Fuses have a limited lifespan

49. What is the purpose of a fuse carrier in a fuse holder?

a) To provide mechanical support to the fuse wire

b) To provide electrical insulation

c) To hold the fuse wire securely in place

d) To regulate the voltage in the circuit

Answer: c) To hold the fuse wire securely in place

50. Which of the following is a characteristic of a fast-blow fuse?

a) It can withstand high levels of current for a short duration

b) It can withstand high levels of current for a long duration

c) It blows quickly in response to an overcurrent

d) It provides a delayed response to an overcurrent

Answer: c) It blows quickly in response to an overcurrent

JNANAPEETA DCET ACADEMY