

# BASIC ELECTRICAL AND ELECTRONICS

Q. ID: ITISKILL282572

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Answer Key

Duration: 60 Mins

Total Marks: 41

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1. Which instrument is used to check the continuity of the field coils of DC motor?

- A) Ohmmeter                      B) Voltmeter  
C) Wattmeter                    D) Ammeter

**Answer: A) Ohmmeter**

2. Which is the Ohm's Mathematical Expression?

- A)  $I=(V/R)$                       B)  $R=(I/V)$   
C)  $V=(I/R)$                       D)  $I=(R/V)$

**Answer: A)  $I=(V/R)$**

3. How electrons move in a conductor?

- A) Conductance                    B) Voltage difference  
C) Resistance                      D) Current

**Answer: B) Voltage difference**

4. How the number of positive and negative plates are compared in a lead acid Battery?

- A) Positive plates is one more than negative plates      B) Positive plate is equal to the negative plate  
C) Negative plate is one less than positive plate      D) Negative plate is one more than positive plates

**Answer: D) Negative plate is one more than positive plates**

5. What does number 25 in the cable size (25/0.012) indicate?

- A) Diameter of the strand      B) Number of the strand  
C) Thickness of the cable      D) Length of the strand

**Answer: B) Number of the strand**

6. What is the energy conversion of battery during discharge?

- A) Electrical energy into chemical energy      B) Electrical energy into mechanical energy  
C) Chemical energy into electrical energy      D) Electrical energy into heat energy

**Answer: C) Chemical energy into electrical energy**

7. Which shell electrons has least energy?

- A) L shell electron                    B) N shell electron  
C) K shell electron                    D) M shell electron

**Answer: C) K shell electron**

8. What is the permissible voltage drop in the electrical circuit?

- A) 0.1 V                                  B) 0.4 V

- C) 0.2 V                                  D) 0.3 V

**Answer: C) 0.2 V**

9. Which electronic component is used as a solid state switch?

- A) Capacitor                            B) Inductor  
C) Resistor                              D) Transistor

**Answer: D) Transistor**

10. Which component is used to measure the engine coolant temperature?

- A) Resistor                              B) Thermistor  
C) Diode                                 D) Transistor

**Answer: B) Thermistor**

11. How is the Battery capacity expressed?

- A) Voltage - hour rating            B) Voltage rating  
C) Ampere - hour rating            D) Ampere rating

**Answer: C) Ampere - hour rating**

12. Which is a temperature sensitive resistor?

- A) Transistor                            B) Diode  
C) Thyristor                            D) Thermistor

**Answer: D) Thermistor**

13. What is the material of positive plate in the lead acid Battery?

- A) Tin                                      B) Antimony  
C) Lead peroxide                      D) Spongy lead

**Answer: C) Lead peroxide**

14. How the semi conductor material can be identified with atomic structure?

- A) Four electrons in the outer most orbit      B) Five electrons in the outer most orbit  
C) Two electrons in the outer most orbit      D) Three electrons in the outer most orbit

**Answer: A) Four electrons in the outer most orbit**

15. Which cable is the thickest used in the automobile wiring?

- A) Horn cable                            B) Wiper motor cable  
C) Head light cable                    D) Starter motor cable

**Answer: D) Starter motor cable**

16. What is the colour of positive plates in the charged lead - acid - battery?

- A) Brown
- B) Grey
- C) Black
- D) White

**Answer: A) Brown**

17. What type of emf is produced if the conductor moved and cut the magnetic field?

- A) Electro-chemical induced emf
- B) Dynamically induced emf
- C) Electro-magnetic induced emf
- D) Statistically induced emf

**Answer: B) Dynamically induced emf**

18. Which type of the circuit leads to hazard effect?

- A) Open circuit
- B) Parallel circuit
- C) Short circuit
- D) Series circuit

**Answer: C) Short circuit**

19. What is the advantage of free maintenance sealed battery?

- A) No need for disconnect the terminals to remove battery
- B) No need for check and top up distilled water.
- C) No need for recharging of battery
- D) No chance for sulphation of battery terminals

**Answer: B) No need for check and top up distilled water.**

20. Which device have the ability to store electrical charge?

- A) Conductor
- B) Capacitor
- C) Insulator
- D) Resistor

**Answer: B) Capacitor**

21. What is the specific gravity reading range of half charged battery?

- A) 1.230 - 1.260
- B) 1.200 - 1.230
- C) 1.170 - 1.200
- D) 1.260 - 1.280

**Answer: B) 1.200 - 1.230**

22. What is the material of negative plate in the lead acid Battery?

- A) Tin
- B) Lead peroxide
- C) Antimony
- D) Spongy lead

**Answer: D) Spongy lead**

23. What is the specific gravity of fully charged battery?

- A) 1.260 - 1.280
- B) 1.240 - 1.250
- C) 1.170 - 1.200
- D) 1.210 - 1.230

**Answer: A) 1.260 - 1.280**

24. Which law state that 'The current is directly proportional to the voltage and inversely proportional to the resistance'?

- A) Boyle's Law
- B) Hook's Law
- C) Newton's Law
- D) Ohm's Law

**Answer: D) Ohm's Law**

25. What is the energy conversion of battery during charging?

- A) Electrical energy into mechanical energy
- B) Chemical energy into electrical energy
- C) Electrical energy into chemical energy
- D) Electrical energy into heat energy

**Answer: C) Electrical energy into chemical energy**

26. What is the net resistance 'R' if 'R1' and 'R2' resistance are connected in series?

- A)  $R = R1/R2$
- B)  $R = R1 + R2$
- C)  $R = R1 \times R2$
- D)  $R = R1 \div R2$

**Answer: B)  $R = R1 + R2$**

27. Which device used to step up the voltage in the spark ignition system?

- A) High Tension Cable
- B) Condenser
- C) Spark plug
- D) Ignition coil

**Answer: D) Ignition coil**

28. Which acid is used in the lead acid Battery?

- A) Sulphuric acid
- B) Nitric acid
- C) Hydro chloric acid
- D) Hydro bromic acid

**Answer: A) Sulphuric acid**

29. What type of resistor is used in the vehicle flasher unit?

- A) Ballast resistor
- B) Film resistor
- C) Printed resistor
- D) Integrated resistor

**Answer: A) Ballast resistor**

30. Which instrument is prohibited to connect with live wire?

- A) Voltmeter
- B) Ammeter
- C) Wattmeter
- D) Ohmmeter

**Answer: D) Ohmmeter**

31. Which is the semi conductor materials?

- A) Arsenic and boron
- B) Aluminium and antimony
- C) Gallium and indium
- D) Germanium and silicon

**Answer: D) Germanium and silicon**

32. Which measuring instrument used to measure the Ampere, volt and resistance?

- A) Galvana meter
- B) Energy meter
- C) Wattmeter
- D) Multi meter

**Answer: D) Multi meter**

33. What is the ampere hour rating if battery deliver 5

ampere and period of 20 hours?

- A) 100 Ampere hour
- B) 110 Ampere hour
- C) 80 Ampere hour
- D) 90 Ampere hour

**Answer: A) 100 Ampere hour**

**34.** What is the reason for fuse blown out in an electrical circuit?

- A) Series circuit
- B) Open circuit
- C) Parallel circuit
- D) Short circuit

**Answer: D) Short circuit**

**35.** Which material is required to make integrated circuit chips?

- A) steel
- B) copper
- C) zinc
- D) silicon

**Answer: D) silicon**

**36.** What is the purpose of colour code in cables?

- A) Refers the size of the wire
- B) Colour refers the current rating
- C) Colour refers the voltage rating
- D) Easy identification of each circuit

**Answer: D) Easy identification of each circuit**

**37.** How many cells are in the 12V Battery?

- A) 9 cells
- B) 12 cells
- C) 2 cells
- D) 6 cells

**Answer: D) 6 cells**

**38.** Which instrument is used to measure the electrical resistance?

- A) Ohmmeter
- B) Ammeter
- C) Wattmeter
- D) Voltmeter

**Answer: A) Ohmmeter**

**39.** How the lead acid Battery is classified?

- A) Primary cell
- B) Secondary cell
- C) Alkaline cell
- D) Dry cell

**Answer: B) Secondary cell**

**40.** Which type of the circuit has an infinite resistance?

- A) Parallel closed circuit
- B) Short circuit
- C) Open circuit
- D) Series closed circuit

**Answer: C) Open circuit**

**41.** What is the use of Ohmmeter in an electrical circuit?

- A) Measure the power
- B) Measure the voltage
- C) Measure the resistance
- D) Measure the current

**Answer: C) Measure the resistance**