

# 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 device used to step up the voltage in the spark ignition system?

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

**Answer: C) Ignition coil**

2. Which is the Ohm's Mathematical Expression?

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

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

3. 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.**

4. What type of emf is proceduced if the conductor moved and cut the magnetic field?

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

**Answer: A) Dynamically induced emf**

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

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

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

6. How electrons move in a conductor?

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

**Answer: B) Voltage difference**

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

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

**Answer: D) Transistor**

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

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

**Answer: B) Starter motor cable**

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

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

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

10. What is the material of possitive plate in the lead acid Battery?

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

**Answer: C) Lead peroxide**

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

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

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

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

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

**Answer: C) Brown**

13. How many cells are in the 12V Battery?

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

**Answer: D) 6 cells**

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

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

**Answer: D) Multi meter**

15. How the lead acid Battery is classified?

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

**Answer: C) Secondary cell**

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

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

**Answer: A) Capacitor**

17. What is the purpose of colour code in cables?

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

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

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

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

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

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

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

**Answer: A) Thermistor**

20. Which shell electrons has least energy?

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

**Answer: A) K shell electron**

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

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

**Answer: B) Ballast resistor**

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

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

**Answer: C) Spongy lead**

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

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

**Answer: D) Ohmmeter**

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

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

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

25. Which is the semi conductor materials?

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

**Answer: D) Germanium and silicon**

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

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

**Answer: B) Short circuit**

27. Which is a temperature sensitive resistor?

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

**Answer: A) Thermistor**

28. Which instrument is used to measure the electrical resistance?

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

**Answer: A) Ohmmeter**

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

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

**Answer: C) Ohmmeter**

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

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

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

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

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

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

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

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

**Answer: B) Measure the resistance**

33. Which type of the circuit has an infinite resistance?

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

**Answer: B) Open circuit**

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

- A) 0.2 V
- B) 0.3 V
- C) 0.1 V
- D) 0.4 V

**Answer: A) 0.2 V**

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

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

**Answer: D) 1.260 - 1.280**

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

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

**Answer: A) 1.200 - 1.230**

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37. What is the ampere hour rating if battery deliver 5 ampere and period of 20 hours?

- A) 110 Ampere hour
- B) 90 Ampere hour

- C) 100 Ampere hour
- D) 80 Ampere hour

**Answer: C) 100 Ampere hour**

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

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

**Answer: B) Short circuit**

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39. Which material is required to make integrated circuit chips?

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

**Answer: C) silicon**

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

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

**Answer: C) Sulphuric acid**

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41. How is the Battery capacity expressed?

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

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

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