

Batteries and Solar Cells

1). Which material is used to make negative plates in lead acid battery?

- (A) Lead dioxide
- (B) Sponge lead
- (C) Lead peroxide
- (D) Lead sulphate

Correct Answer : B

2). Which is used as a top layer of a solar cell?

- (A) Silver
- (B) Silicon
- (C) Copper
- (D) Aluminium

Correct Answer : B

3). How the capacity of the batteries are specified?

- (A) Volt
- (B) Watt
- (C) Volt Ampere
- (D) Ampere hour

Correct Answer : D

4). Which device converts the sunlight into electrical energy?

- (A) Photo voltaic cell
- (B) Liquid crystal diode
- (C) Light emitting diode
- (D) Light dependent resistor

Correct Answer : A

5). What is the effect of buckling defect in a lead acid battery?

- (A) Bending of the electrodes
- (B) Reducing the density of electrolyte
- (C) Increasing the density of electrolyte
- (D) Increasing the internal resistance

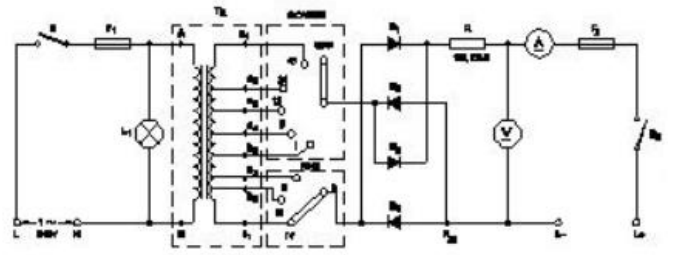
Correct Answer : A

6). Why the vent plug is kept open during charging of a battery?

- (A) To escape the gas freely
- (B) To allow oxygen enter inside
- (C) To check the level of electrolyte
- (D) To check the colour changes in the plates

Correct Answer : A

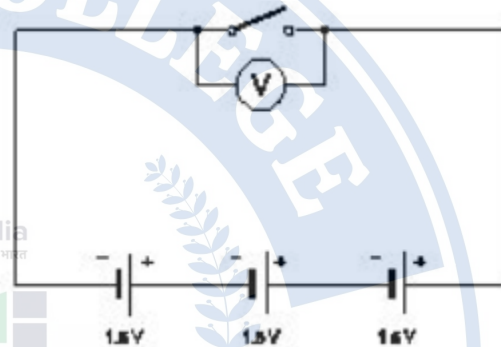
7). What is the function of fine selector switch in battery charger?



- (A) Selection of current rating
- (B) Selection of charging time
- (C) Selection of voltage range
- (D) Selection of charging method

Correct Answer : A

8). What is the total output voltage of the circuit as shown in the figure?



- (A) 0 V
- (B) 1.5 V
- (C) 3.0 V
- (D) 4.5 V

Correct Answer : D

9). Which is used as a positive electrode in a dry cell?

- (A) Zinc
- (B) Carbon
- (C) Copper
- (D) Lithium

Correct Answer : B

10). What is the name of the defect that leads to bending of plates in secondary cells?

- (A) Buckling
- (B) Local action
- (C) Partial short
- (D) Hard sulphation

Correct Answer : A

11). What is the purpose of the separator in lead acid battery?

- (A) To provide a path for electrolyte
- (B) To hold the positive and negative plate firmly
- (C) To avoid short circuit between the positive and negative plates

(D) To keep the positive and negative plate in a sequence array

Correct Answer : C

12). What is the reaction that takes place in negative plate of lead acid battery after complete discharging?

- (A) Become sponge lead(P)
- b) (B) Become lead peroxide (PbO_2)
- (C) Become lead sulphate ($PbSO_4$)
- (D) Water

Correct Answer : C

13). Which electrolyte used in carbon zinc dry cells?

- (A) Dilute sulphuric acid
- (B) Ammonium chloride
- (C) Potassium hydroxide
- (D) Concentrated hydrochloric acid

Correct Answer : B

14). What is the Electro Chemical Equivalent (ECE) of silver?

- (A) 0.001182 mg/coulomb
- (B) 0.01182 mg/coulomb
- (C) 0.1182 mg/coulomb
- (D) 1.1182 mg/coulomb

Correct Answer : D

15). Which part is losing its weight during the electrolysis?

- (A) Cathode
- (B) Anode
- (C) Electrolyte
- (D) Separator

Correct Answer : B

16). Which instrument is used to measure the specific gravity of electrolyte in lead acid battery?

- (A) Barometer
- (B) Hydrometer
- (C) Anemometer
- (D) High rate discharge tester

Correct Answer : B

17). What will be the effect if one cell is connected with reverse polarity in a parallel combination circuit?

- (A) Voltage become zero
- (B) Become open circuit
- (C) Will get short circuited
- (D) No effect

Correct Answer : C

18). What is the effect on output power with respect to the temperature of solar cells?

- (A) No effect due to change in temperature
- (B) Increases with increase in temperature

(C) Decreases with increase in temperature

(D) Decreases with decrease in temperature

Correct Answer : C

19). Which cell is most often used in digital watches?

- (A) Voltaic cell
- (B) Lithium cell
- (C) Mercury cell
- (D) Lead acid cell

Correct Answer : C

20). Which is the cause for buckling defect in lead acid battery?

- (A) Overcharging or over discharging
- (B) Charging with low rate for short period
- (C) Formation of sediments falling from the plate
- (D) Battery is kept in discharged condition for long period

Correct Answer : A

21). How the positive plate changes, after the complete charging of lead acid battery?

- (A) Sponge lead (Pb)
- (B) Lead peroxide (PbO_2)
- (C) Lead sulphate ($PbSO_4$)
- (D) Water

Correct Answer : B

22). What happen if battery is wrongly connected during the charging?

- (A) Draws very high current
- (B) Draws very low current
- (C) No current flow
- (D) Works normally

Correct Answer : A

23). What is the Electro Chemical Equivalent (ECE) of copper?

- (A) 0.329 mg/coulomb
- (B) 0.329 g/coulomb
- (C) 1.1182 mg/coulomb
- (D) 1.1182 g/coulomb

Correct Answer : A

24). What is the purpose of the hydrometer is used during charging of battery?

- (A) To determine the AH capacity
- (B) To measure the battery voltage
- (C) To measure the battery current
- (D) To measure the specific gravity of electrolyte

Correct Answer : D

25). What is the unit of electric charge?

- (A) Volt
- (B) Watt
- (C) Ampere

(D) Coulomb
Correct Answer : D

