

Ans.(c)
(iii) Substances which flow in the internal circuit of a galvanic cell is
 (a) electrons (b) ions
 (c) both electrons and ions (d) none of these

Ans.(b)
(iv) Zn reacts with dilute H_2SO_4 to give H_2 , but Cu does not because.
 (a) Zn has a lower reduction potential than hydrogen
 (b) Zn has a higher reduction potential than hydrogen
 (c) Cu has a lower reduction potential than hydrogen
 (d) None of these

Ans.(c)
(v) In metallurgy, flux is substance used to convert
 (a) infusible impurities to fusible material
 (b) fusible impurities to infusible material
 (c) minerals into silicate
 (d) soluble particles to insoluble particles

Ans.(a)
(vi) An alloy which does not contain Cu is
 (a) bronze (b) solder
 (c) brass (d) bell metal

Ans.(b)
(vii) Backlite is made by the polymerisation of
 (a) phenol and formaldehyde
 (b) melamine and formaldehyde
 (c) Urea and formaldehyde
 (d) Ethylene glycol and phthalic acid

Ans.(a)
(viii) Amount of oxygen required for oxidation of both biological active and inert organic matter is called
 (a) BOD (b) COD (c) O_2 (d) None

Ans.(b)

Q.2 Give answer SLx in brief.

(i) Give the electronic configuration of the followings.

Ans.(a) $H^+ = 1s^2$
 (b) $Na^+ = 1s^2, 2s^2, p^6$
 (c) $F^- = 1s^2, 2s^2, 2p^6$
 (d) $Cu^+ = 1s^2, 2s^2, 2p^6, 3s^2, 3p^6, 4s^0, 3d^{10}$

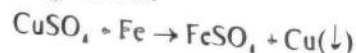
(ii) How many shells, subshells orbitals and electrons are present in an atom with atomic number 11 and atomic mass 23?

Ans. Refers to chapter 1 Q. no. 13

(iii) Why does blue colour of $CuSO_4$ solution get discharged when an iron rod is dipped into it?

Ans. When iron rod is dipped into $CuSO_4$ solution the iron reacts with $CuSO_4$ solution and gives Ferrous sulphate $FeSO_4$ and the blue colour of $CuSO_4$ solution gets discharged and we

we get following reaction



(iv) Define the following:

(a) Gangue (b) Flux
 (c) Ductility (d) Malleability

Ans. Refers to chapter 3 Q. no. 2

(v) Discuss the purpose of alloying metals?

Ans. Refers to chapter 3 Q. no. 3

(vi) What are the main sources of Air pollution?

Ans. Refers to chapter 5 Q. no. 3

(vii) Write about Global warming.

Ans. Refers to chapter 5 Q. no. 10(d)

Q.3 Answer the following:

(i) What is Aufbau principle? Write down the no. of unpaired electron present in following?

(At. no. Fe 26, Cl = 17)

(a) Fe (b) Cl

Ans. Refers to chapter 1 Q. No. 16

(ii) What is Faraday's Law of electrolysis? Explain.

Ans. Refers to chapter 2 Q. no. 13

(iii) Discuss the electrolysis of $CuSO_4$ solution by using Cu electrodes & Platinum electrodes.

Ans. Refers to chapter 2 Q. no. 10

Q4. How much copper will be deposited on the cathode of an electrolytic cell containing $CuSO_4$ solution by the passage of a current of 2 amperes for 30 minutes (At mass of Cu = 63.5)

Ans. $I = 2 \text{ amp}$; $t = 30 \text{ minutes} = 30 \times 60 = 1800 \text{ sec.}$

$Cu = 63.5$ $Cu = Cu^{2+} + 2e^-$

$$Z = \frac{\text{equivalent weight}}{\text{mole of } e^-} = \frac{63.5}{2 \times 96500} = 3.3 \times 10^{-4}$$

$$m = zit; = 3.3 \times 10^{-4} \times 2 \times 1800 = 1.184 \text{ gram of Cu}$$

So, 1.184 gm of copper will be deposited on the cathode of an electrolytic cell.

Q5. Write down the two methods employed for the preparation of alloys.

Ans. Refers to chapter 3 Q. no. 8

Q6. Define and explain the term addition and condensation polymerisation with suitable example.

Ans. Refers to chapter 4 Q. no. 1