

Engineering Chemistry

(2013)

Q1. Choose one correct from four alternatives in each of the following:

(i) Which one is used as frother in concentration of Sulphide Ores?

- (a) CuSO_4 (b) NaCN (c) Pine Oil (d) NaCl

Ans.(c)

(ii) Which is mass less

- (a) α -rays (b) H-atom
(c) Helium (d) Gamma rays

Ans.(d)

(iii) Number of unpaired Valence electron in Sc(21) is

- (a) 01 (b) 02 (c) 03 (d) 04

Ans.(a)

(iv) The overlap of two S-Orbitals results in the formation of

- (a) σ - bond (b) π - bond
(c) τ - bond (d) π & σ -bond

Ans.(a)

(v) p^H of Acid Rain due to pollution of Atmosphere is

- (a) > 7 (b) < 7 (c) $= 7$ (d) none

Ans.(b)

(vi) Vulcanisation of Rubber is done by

- (a) S (b) Br_2 (c) Cl_2 (d) I_2

Ans.(a)

(vii) Best method of disinfection of water is

- (a) Bleaching Powder (b) Chlorine gas
(c) O_3 (d) Calagon

Ans.(a)

(viii) Wood's metal has highest percentages of

- (a) Bi (b) Cd (c) C (d) Cu

Ans.(a)

(ix) Synthetic Rubber is also called

- (a) Plastomer (b) Elastomer
(c) Creptomer (d) Blastomer

Ans.(a)

(x) Standard hydrogen electrode consist electrode of

- (a) Copper (b) Zinc
(c) Platinum (d) Uranium

Ans.(c)

Q2.(a) Explain Hund's Rule with example:

Ans. Refers to chapter 1 Q. no.4

Q2.(b) (i) Differentiate between Electrovalent & Covalent bond.

(ii) Differentiate between Orbit & Orbital.

Ans. Refers to chapter 1 Q. No. 10 & 11

Q3. Write significance in few lines of conductor, insulator, Dielectrics, Electrolyte, Electrodes.

Q4.(a) Write in Few Lines about Mechanical Properties of metals Toughness, Ductability, Malleability, Machinability, Hardness.

Refers to chapter 3 Q. no. 1

Q4.(b) Define alloy. Write and Explain the purpose of making alloys with example.

Ans. Refers to chapter 3 Q. no. 3

Q5.(a) Define Plastic with a least two examples.

Ans. Refers to chapter 4 Q. no. 2

Q5.(b) Differentiate between Natural & Synthetic Rubber? Why Synthetic Rubber is very important for Transport Industry?

Ans. Refers to chapter 4 Q. no.7&8

Q6.(a) What is Pollution? Write their types?

Ans. Refers to chapter 5 Q. no. 1

Q6.(b) Give your at least on suggestion to prevent different kind of Pollution?

Ans. Refers to chapter 5 Q. no.12

Q7. Write short notes on any three.

(a) Acid Rain

(b) Compounding of Plastics

(c) Vulcanisation

(d) Preventive Environment Activities

(e) Thermal Insulation

Ans(a) Refers to chapter 5 Q. no.11(a)

(b) Refers to chapter 4 Q. no. 5

(c) Refers to chapter 4 Q. no. 9(b)

(d) Refers to chapter 5 Q. no.12

(e) Refers to chapter 4 Q. no.9(c)