Std: XII Science   **Marks: 20**

Date: 11/08/2017   # Chemistry   **Time: 1 Hr**

Instructions:-
(1) All questions are compulsory; however Q. 4 and Q.10 have internal choice.
(2) Section-A consists of 4 questions of 1 mark each.
Section-B consists of 3 questions of 2 marks each.
Section-C consists of 2 questions of 3 marks each.
Section-D consists of 1 question of 4 marks.
(3) Use Log Tables, if necessary. Use of calculators is not allowed.

Section-A

Q.1.   The transparent soaps are prepared by dissolving the soap in_____   (1)
Glycerol   # Ethanol   # Propanol   # Ethylene glycol

Q.2   An example of ambident nucleophile is _____   (1)

OH^- # NH_3 # NO_2^- # OR^-

Q.3.   Draw a neat labelled diagram showing magnetic separation process of   (1)
concentration of an ore.

Q.4.   Answer the following   (1)

1. A FCC lattice cube is formed by atoms A and B .if atom A is present at the corner of the cube and the atom B at the faces of the cube. Find out the formula of the compound?

OR

LiCl in excess of Li is pink in colour. Give reason

Section-B

Q.5.   Answer the following.   (2)
1. Write a point of difference between Antiseptic and Disinfectant
2. Give one example each of Tranquilizer and artificial sweetening agent

Q.6.   With reference to the following graph label **A** and **B**   (2)
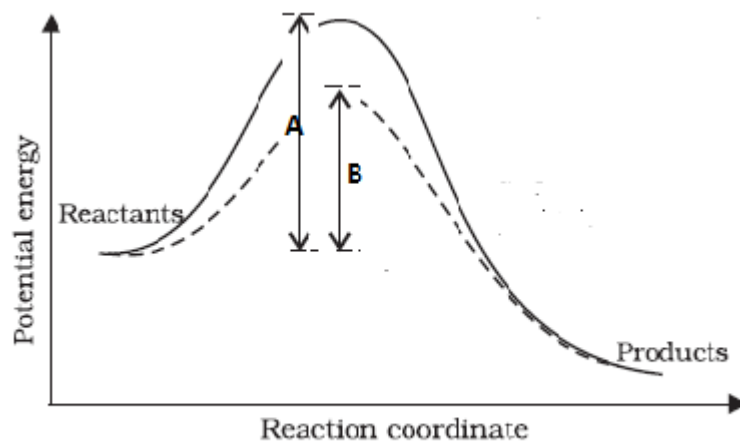
Effect of catalyst on activation energy

Write the units for (i) rate of reaction (ii) rate constant of second order reaction

Q.7. Answer the following. (2)
  a) Write chemical equations involved in refining of Zirconium by Van Arkel method.
 b) What are the conditions that are necessary for vapour phase refining?

Section-C

Q.8. Derive integrated rate equation for the following zero order reaction (3)
$$R \longrightarrow P$$
Calculate activation energy of particular reaction whose rate triples when temperature changes from 50°C to 100°C.
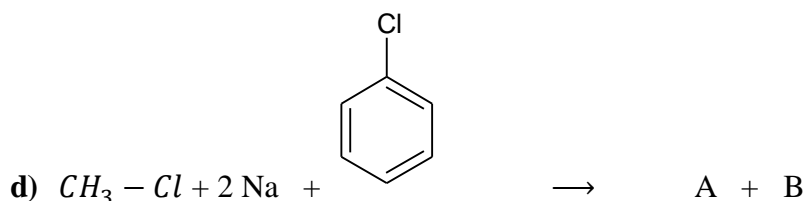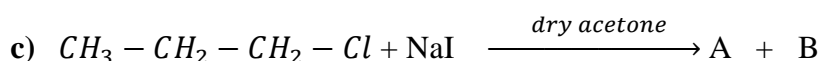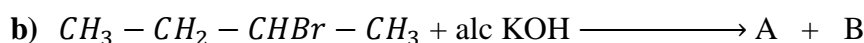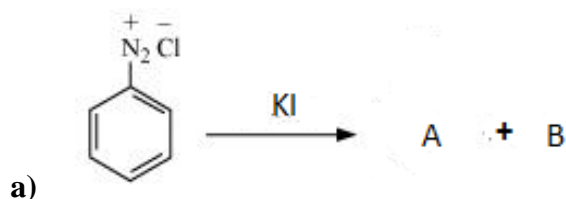$(R = 8.314 \ JK^{-1}mol^{-})$

Q.9. Answer the following. (3)
  a) Draw a Body centred cubic unit cell
  b) What type of magnetism is shown in the following alignment of magnetic moments?
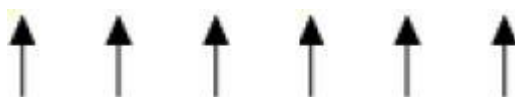
  c) What type of point defect is produced when AgCl is doped with CdCl$_2$

Section-D

Q.10. Complete the following chemical reaction and mention the IUPAC name of the (4) major product:

a)

b) $CH_3 - CH_2 - CHBr - CH_3 + \text{alc KOH} \longrightarrow A + B$

c) $CH_3 - CH_2 - CH_2 - Cl + \text{NaI} \xrightarrow{\ dry\ acetone\ } A + B$

d) $CH_3 - Cl + 2 \ Na +$ [chlorobenzene] $\longrightarrow \quad A + B$

OR

Q.10. Write a complete chemical reaction for the following conversion:

  a) Chloroethane to propane nitrile

  b) Propan-1-ol to bromopropane

  c) Chlorobenzene to 1,4-dichlorobenzene

  d) But-2-ene to 2-bromobutane

----------------------THE END----------------------