

Core-VIII Semester (IV)

B.Sc [Chemistry]

Attempt any two:

- (1) Discuss crystal field theory of coordination compounds in octahedral and tetrahedral crystal fields.

5 Marks

- (2) (i) Define the following terms (a) Ligands (b) Co-ordination no. (c) Co-ordination sphere
(ii) What is the difference between double salt and co-ordination compounds?

(1+1+1) +2 Marks

- (3) (i) What are chelates?

(ii) Give the IUPAC name of following co-ordination compounds:

3 +(1+1) Marks



Core-IX Semester (IV)

B.Sc [Chemistry]

Attempt any two:

- (1) Discuss the followings: (i) Gabriel phthalimide synthesis of Amines (ii) Mannich reaction

2.5+2.5 Marks

- (2) How you make distinction between 1°, 2° and 3° amines with Hinsberg reagent and nitrous acid.

2.5+2.5 Marks

- (3) Discuss with neat mechanism: (i) Paal-Knorr synthesis of pyrrole (ii) Fischer indole synthesis

2.5+2.5 Marks

Core-X Semester (IV)

B.Sc [Chemistry]

Attempt any two:

- (1) Derive the Nernst's equation.

5 Marks

- (2) Write short notes on the followings:

(i) Molar conductivity

(ii) Concentration cells

2+3 Marks

- (3) Describe the Kohlrausch law of independent migration of ions and its various application.

5 Marks