

B.Sc. (FS) Semester - 2 (NEP-2020) Examination

JUNE – 2024

Chemistry: Foundation in Chemistry (Minor-2)

Time: 2:00 Hours

Marks: 50

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Answer the following questions. (10)
(A) Discuss: Diagonal relationship of Lithium and Magnesium. (05)
(B) Write a detailed note on Flame test in Qualitative Analysis. (05)
OR
- Que.1 Answer the following questions. (10)
(A) Explain classification of Oxides of p-block elements based on their chemical behaviour. (05)
(B) (i) Write a note on Metallic character of s-block elements. (03)
(ii) Give any five uses of NaHCO_3 . (02)
- Que.2 Answer the following questions. (10)
(A) Write a note on Electrophilic aromatic substitution reaction of benzene with general mechanism. (05)
(B) Explain Formation of Alkenes by..... (05)
(i) Dehydration of alcohols & (ii) Dehydrohalogenation of alkyl halides.
OR
- Que.2 Answer the following questions. (10)
(A) Explain: Halogenation & Hydration reactions of Alkynes. (05)
(B) Discuss: Baeyer's strain theory for Cyclo-alkanes. (05)
- Que.3 Answer the following questions. (10)
(A) Write a note on Degree of dissociation & factors affecting on it. (05)
(B) (i) Write a note on Ionic solids. (03)
(ii) Explain: Schottky Defect in solids. (02)
OR
- Que.3 Answer the following questions. (10)
(A) Explain Common ion effect & calculation of OH^- and H^+ ions. (05)
(B) Give any five differences between Crystalline & Amorphous solids. (05)
- Que.4 Answer the following questions. (10)
(A) Give preparation, physical properties & uses of Na_2CO_3 . (05)
(B) (i) Explain Addition reaction of Cyclopropane & Cyclobutane. (03)
(ii) Describe application of Huckle rule to simple annulenes for aromaticity. (02)
OR
- Que.4 Answer the following questions. (10)
(A) Discuss: Saytzeff and Hofmann rule for Alkenes. (05)
(B) (i) Give preparation & properties of Borax. (03)
(ii) Explain only the working method of Charcoal test in Qualitative analysis. (02)
- Que.5 Answer the following questions. (10)
(A) Discuss: Nucleophilic addition reaction of Alkynes with HCN & Alcohols. (05)
(B) Write a note on Dissociation Constant for weak acids. (05)
OR
- Que.5 Answer the following questions. (10)
(A) Calculate No. of atoms per unit cell for SCP, BCC & FCC. (05)
(B) Give methods of preparation of small ring Cyclo-alkanes. (05)
