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School of Basic Sciences
Bachelor of Science Honours in Chemistry
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem II - C1UB203B - Chemistry of Group Elements

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Summarise the complexes of EDTA with calcium and magnesium. K2 (2)
- 2) Why atomic radii are different from ionic radii in alkali metals? K1 (3)
- 3) Illustrate the importance of reducing nature in metal compounds. K2 (4)
- 4) Explain that Copper and silver are below hydrogen in the electrochemical series and yet they are found in the combined state as sulfides in nature.. K2 (6)
- 5) Utilize the stability of different oxidation states of s-block element with suitable examples. K3 (6)
- 6) Apply the process of 'Zone refining' using diagram. K3 (9)
- 7) Compare the principle of the following process in detail : K4 (8)
(i) Hydrometallurgy (ii) Mond's process (iii) van Arkel-de Boer process (iv) Electrolytic refining.
- 8) Analyze the principle of the following process in detail : (i) Mond's K4 (12)
process (ii) Zone refining (iii) Electrolytic refining.

OR

Analyze the diagonal relationships that influence the properties of elements in the periodic table. K4 (12)