

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

B.Sc.(Chemistry) END SEMESTER EXAMINATIONS NOVEMBER -2023

SEMESTER - III

22UCHCT3006 - Chemistry of s- and p-block elements

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. List the biological importance of any two alkali metals.
2. Discuss the structure of diborane and boron nitride.
3. Define catenation and heterocatenation and give suitable examples.
4. Draw the structure of hypophosphorous acid, orthophosphorous acid, hypophosphoric acid, orthophosphoric acid and metaphosphoric acid.
5. Describe the anomalous behaviour of oxygen.
6. Explain the applications of oxygen, S, Se, Te and Po.
7. Explain any one method of preparation and structure of BrF_3 .
8. Define pseudohalogens and discuss the properties and structure of any one.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Discuss the preparation and properties of XeF_2 , XeF_4 and XeF_6 .
10. Discuss the preparation, properties, structure and uses of any one oxides of sulphur.
11. Describe the preparation, properties, structure and uses of any one hydrides of nitrogen.
12. Classify and explain the structure of various silicates.
13. Discuss the chemistry involved in the preparation and setting of portland cement.
