

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 APRIL-2023
SEMESTER - IV

20UCHCT4007 - General Chemistry - VII

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section B

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

1. Explain the mechanism of sulphonation with suitable examples?
2. Sketch on the preparation of Marshall's acid by anodic oxidation of sulphuric acid.
3. Give the preparation and applications of silicones.
4. Describe the classification of elements based on their action in biological systems.
5. Illustrate the role of phosphorus in NPK fertilizers.
6. Predict the amphoteric nature of oxides with suitable examples.
7. How inorganic polymers are classified? Write their different types with examples.
8. Enumerate with examples, the excess and deficiency of trace metals.

Section C

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

9. i) Describe the mechanism of Friedel Crafts acylation with a suitable example. (5)
ii) Explain the theory of orientation. (5)
10. Give a comparative account on
i) oxoacids of nitrogen
ii) oxoacids of phosphorous.
11. i) Draw and explain the structures of sulphur dioxide and sulphur trioxide. (6)
ii) In oxoacids of sulphur, sulphur exhibits a tetrahedral structure when coordinated to oxygen. Justify. (4)
12. Predict the structural features and applications of borazine and phosphazene.
13. i) What is metal ion toxicity? Ascertain the toxic nature of lead and mercury. (7)
ii) Enlist the applications of iron in bio-systems. (3)
