

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. END SEMESTER EXAMINATIONS APRIL-2022

SEMESTER - IV

20UCHCT4007 - General Chemistry - VII

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. a. State Huckel's rule (2)
b. What are the conditions a molecule said to be aromatic? (3)
2. When aniline reacts with nitronium ion, whether ortho, para substituted or meta substituted product is possible and why?
3. Write a brief account on oxides of sulphur.
4. Give the preparation and molecular structure of phosphorous acid and ortho-phosphoric acid.
5. Write down the preparation of superphosphate and triple superphosphate.
6. Synthesise any two inorganic polymers.
7. Write a brief account on borazines.
8. Name the metal ions present in biological systems and classify it based on their activity.

Section B

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

9. Explain the following reactions with mechanism
a. Nitration of Benzene (5)
b. Friedal – Crafts alkylation and acylation (5)
10. Write down the preparation and properties of any five types of oxides.
11. Give the preparation of the following inorganic compounds:
a. Nitrous acid b. Hypo-nitrous acid c. Nitric acid d. Hydrozoic acid
e. Per-nitric acid.
12. Synthesise the various types of silicones and explain their structures.
13. a. Discuss about the impact of excess and deficiency of some trace metals present in biological systems. (5)
b. Give the structure of haemoglobin and mention the applications of iron in bio system. (5)
