

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 NOVEMBER-2022

SEMESTER - I

20UCHCT1001 - General Chemistry - I

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

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

1. Predict the hybridization and shape of the ethylene and benzene.
2. Explain Fajan's rules and list the factors affecting the polarisation of anion.
3. Describe the green reaction with suitable examples.
4. What are all the general precautions for avoiding accidents in the laboratory?
5. Classify the various types of Elimination reactions with examples.
6. Predict the shape of the given molecules using VSEPR theory.
i) H_2O ii) NH_3 iii) PCl_5 iv) SF_6 v) BF_3
7. Define Green chemistry. List the need for green chemistry.
8. What is meant by antidote? Explain the same with an example.

Section B

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

9. Differentiate carbocation, carbanions and free radicals with suitable examples.
10. Classify the types of Substitution reactions with mechanisms.
11. A) Compare Hydrogen bonding types with examples.
B) Describe the metallic bonding using the Band theory of metals.
12. Summarize any ten principles of green chemistry involved in the synthesis.
13. Outline the procedures of First aid techniques that can be used in chemical laboratories.
