

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 - I

20UCHCT1001 - General Chemistry - I

Total Duration : 3 Hrs.

Total Marks : 60

**Section A**

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

1. Explain the structure of benzene.
2. Discuss Hofmann and Saytzeff rule.
3. What is M.O theory and draw the M.O diagram of CO and NO molecules
4. Explain the need for Green chemistry.
5. Elaborate on the general precautions to avoid accidents.
6. Differentiate Intramolecular and Intermolecular Hydrogen bonding.
7. What is  $S_N^i$  reaction? Explain its mechanism.
8. Discuss hyper conjugation and mesomeric effect.

**Section B**

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

9. Discuss the stability of carbocations, carbanions and free radicals
10. Describe the effect of substrate, solvent, nucleophile and leaving group on nucleophilic substitution reactions.
11. Explain Born-Haber cycle and its application.
12. Discuss the twelve principles of green chemistry and its limitations.
13. Describe the first aid techniques.

\*\*\*\*\*