

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.CND - END SEMESTER EXAMINATIONS - APRIL 2025

SEMESTER - I

**20UNDAT1001 - Allied Chemistry - I**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### Section B

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

1. Explain common ion effect.
2. Give the preparation and uses of urea.
3. Sketch the mechanism of sulphonation in Benzene.
4. Enumerate the preparation and properties of furan.
5. State Grothus-Draper Law and Stark Einsteins law.
6. Predict and elaborate on the hybridization in acetylene.
7. Elaborate the preparation and properties of thiophene.
8. Justify the photochemistry behind Hydrogen –chlorine reaction.

### Section C

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

9. Derive Henderson's equation and discuss the buffer action in biological systems.
10. Predict and discuss the method used in softening hard water.
11. Classify the different types of chemical reactions.
12. Prepare pyrrole and pyridine and list their properties.
13. Compare the following photochemical processes-Photosynthesis, Photosensitization, and Chemiluminescence.

\*\*\*\*\*