

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 - NOV'2024

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. Determine the pH of 2.3% ionized 0.002 M acetic acid solution.
2. i) What are strong and weak electrolytes. (2 marks)
ii) Briefly explain common-ion effect. (3 marks)
3. Describe the manufacture of water gas with neat diagram.
4. Explain the preparation and uses of ammonium sulphate and triple superphosphate.
5. Compare addition and elimination reactions with suitable examples.
6. Electrophilic substitution in pyrrole is favourable at 2nd position. Substantiate.
7. Explain the synthesis and properties of thiophene.
8. Differentiate phosphorescence from fluorescence.

Section C

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

9. Derive Henderson's equation and give its significance.
10. i) Distinguish temporary and permanent hardness of water.
ii) Explain reverse osmosis method.
11. Discuss the hybridisation of carbon in methane and ethylene molecules with neat diagrams.
12. i) Compare the basicity of pyrrole and pyridine.
ii) Outline the preparation, properties and uses of furan.
13. i) Distinguish photochemical reactions from thermal reactions. (2 marks)
ii) Discuss photosynthesis process. (8 marks)
