

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

20UFMAT1001 - Allied Chemistry - I

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

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

1. What are the 7 weak electrolytes?
2. Describe the mechanism of buffering action.
3. Discuss the importance of fuel gases in our daily life.
4. Describe the disadvantages of using hard water.
5. Classify organic compounds using a flowchart.
6. Apply the mechanism of the electrophilic substitution reaction and how is the electrophile generated in the nitration of benzene?
7. Describe the preparation and properties of furan.
8. Distinguish between fluorescence and chemiluminescence.

Section B

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

9. Explain why the Henderson-Hasselbalch equation is used in biological systems? Write its significance.
10. Apply the concept of reverse osmosis and explain the purification of water for domestic use with the help of chlorine, ozone, and UV- light.
11. Examine the following reactions with examples: addition, substitution, elimination, condensation, and polymerization.
12. Prepare thiophene, pyrrole and pyridine and write the properties of anyone.
13. Examine the statement of Grothus-Draper Law and Stark-Einsteins law. Write the definition of quantum yield.
