

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(affiliated to the University of Madras and accredited with 'A+' Grade by NAAC) Chromepet,
Chennai — 600 044.

B.Sc. END SEMESTER EXAMINATION APRIL/NOV - 2021
SEMESTER - III
20UPBAT3003 - Allied Chemistry - I

Total Duration : 3 Hrs	Total Marks : 75
MCQ : 30 Mins	MCQ : 15
Descriptive : 2 Hrs.30 Mins	Descriptive : 60

Section B

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

1. Discuss the hybridization and shapes of IF_5 and IF_7 .
2. Explain any one method of extraction of metals from an ore.
3. Differentiate the following:
 - (i) Reversible and irreversible processes
 - (ii) Isothermal and adiabatic processes
4. Explain the principle and applications of thin layer chromatography.
5. Illustrate the hybridization and geometry of acetylene molecule.
6. Write any five differences between maleic and fumaric acid.
7. Write the mechanism of Haworth synthesis of naphthalene.
8. Outline the role of carbon in the properties of steel.

Section C

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

9. Discuss the molecular orbital theory of H_2 and O_2 molecule and find its bond order.
10. Explain the following types of refining in detail.
 - (i) Electrolytic refining
 - (ii) Van Arkel and Zone refining.
11. Discuss Carnot's cycle and efficiency of a heat engine.
12. Explain the methods of racemization and resolution.
13. Discuss the methods of structural elucidation of naphthalene.