

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 EXAMINATION APRIL/NOV - 2021

SEMESTER - III

18UPBAT3AC3 - Allied Chemistry - I

<b>Total Duration : 3 Hrs</b>		<b>Total Marks : 75</b>
MCQ	: 30 Mins	MCQ : 15
Descriptive	: 2 Hrs.30 Mins	Descriptive : 60

Section B

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

1. Explain the M.O configuration of  $O_2$ .
2. Discuss the role of carbon in the properties of steel.
3. Define Entropy and explain its significance.
4. Describe Thin layer chromatography.
5. Explain optical isomerism in lactic acid.
6. Explain Van-Arkel process and zone refining.
7. Describe the structure of benzene.
8. Differentiate
  - (a) isothermal and adiabatic process
  - (b) Intensive and Extensive properties

Section C

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

9. Explain the structure of  $IF_7$  and  $BrF_3$ .
10. Describe the heat treatment of steel.
11. Discuss Carnot Cycle and efficiency of a heat engine.
12. Describe the structural elucidation of naphthalene.
13. Discuss the principle and application of column chromatography.