

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 APRIL-2022

SEMESTER - I

20UCHCT1002 - General Chemistry II

Total Duration : 3 Hrs.

Total Marks : 60

**Section A**

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

1. Explain Bohr's model of an atom. Give its application and limitations.
2. Describe Baeyer's Strain theory.
3. Explain Schottky and Frenkel defects.
4. Distinguish between Protic and Aprotic solvents.
5. Write short note on a) Heisenberg's uncertainty principle. b) Aufbau's principle.
6. Describe Miller indices. How will you apply for BCC?
7. Explain the principles of qualitative analysis and illustrate with example.
8. What is ionisation potential? Give its factors and application.

**Section B**

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

9. a) Write Schrodinger's wave equation.  
b) Describe and illustrate different quantum numbers.
10. a) Describe in detail about s, p, d and f block elements.  
b) Explain Sanderson's electron density ratio.
11. Prepare the following reactions:  
a) Wurtz reaction. b) Kolbe's electrolytic method.  
c) Corey House method. d) Dickmann's ring closure  
e) Mechanism of halogenation.
12. a) What are the different types of unit cell which occur in crystals?  
b) Write down the Born-Landé equation and define the various terms used.  
c) Sketch and explain the structure of NaCl.
13. a) Describe Arrhenius theory.  
b) Write note on HSAB principle.  
c) What do you mean by common ion effect.

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