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 - I
17UCHCT1002 - General Chemistry - II

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. State and explain Compton Effect.

2. a. Explain the Pauli's exclusion principle in detail.
   b. What is effective nuclear charge? Give its example.

3. Discuss briefly s,p,d and f block elements of periodic table.

4. a. Explain the electronegativity of Mulliken's scales.
   b. Write the Wurtz reaction.

5. a. Discuss the mechanism of nitration of benzene.
   b. Write notes on Wurtz-Fittig reaction.

6. a. Draw and discuss the structure of NaCl.
   b. Define Miller indices.

7. a. What are isotropic and anisotropic solids?
   b. Define common ion effect. Give suitable example.

8. Explain the solubility product of principle and its applications.

Section C

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

9. a. State and explain Heisenberg's uncertainty principle and its significances.
   b. Explain the Hund's rule and Aufbau principle.

10. Write notes on:
    i) atomic radii ii) covalent radii
    iii) ionisation potential and
    iv) electron affinity

Contd...

11. a. Describe the Dieckmann's method of preparing cycloalkenes.
    b. Explain the Byer's strain theory.

12. a. Derive Bragg's equation of X-ray diffraction.
    b. Explain Schotty defect

13. a. Explain the Arrhenius theory of acid and base.
    b. Write notes on protic and aprotic solvents.

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