

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 - IV

20UCHCT4008 - General Chemistry - VIII

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. Write down the preparation of BrF_3 and IF_5 and give their structures.
2. Discuss about the position of inert gases in the periodic table and its uses.
3. Write a brief note on clathrates.
4. Write down the benzoin condensation with mechanism.
5. Write down Aldol reaction and Wittig reaction.
6. State Grothus – Draper law and Beer –Lambert's law.
7. a. Define quantum yield (2)
b. Write down the photochemical reaction of chlorination of methane with mechanism. (3)
8. a. Give the principle of gravimetric analysis (2)
b. What is called by co-precipitation and post-precipitation? (3)

Section B

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

9. Write down the preparation, properties and molecular structure of thiocyanate and azide compounds.
10. Describe the preparation, properties and molecular structure of XeF_4 and XeF_6 .
11. Explain the following reactions with mechanism:
 - a. Knoevenagel condensation
 - b. Claisen – Schmidt reaction
 - c. Perkin reaction
 - d. Cannizaro reaction
12. Define the following terms:
 - a. Photosensitisation with example
 - b. Fluorescence
 - c. Phosphorescence

Contd...

d. Chemiluminescence

e. Quenching

13. a. Mention the characteristics of precipitating agents and discuss the conditions of precipitation. (5)
- b. Explain the role of DMG and oxime as selective precipitants. (5)
