B.Sc. DEGREE EXAMINATION,APRIL 2019
II Year IV Semester
General Chemistry- VIII

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. Complete the following equations
   ClF_3 + AgCl$\rightarrow$
2. How does fluorine react with water?
3. How is XeF4 prepared?
4. Write the electron dot formula of XeO_3.
5. What are nucleophiles? Give examples.
6. How will you prepare Wittig reagent?
7. What is fluorescence?
8. Draw the structure of cupferron reagent.
9. Why does a precipitate form?
10. Define quantum yield.
11. State Stark-Einstein law.
12. What is sequestering agent? Give examples.

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Discuss the mechanism of addition-elimination reaction.
14. Highlight the history of elemental fluorine.
15. How is XeF_6 prepared? Discuss its structure.
16. What is the role of photochemical reactions in biochemical processes?
17. Explain the characteristics of precipitating agents.
18. Discuss the mechanism of Benzoin condensation.
19. Write Lambert-Beer's law. Explain the physical significance of absorption coefficients.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Discuss the mechanism of the following naming reaction.
    (i) Knoevenagel (ii) Perkin

21. a. Write a note on theories of precipitation. (6)
    b. What are the applications of EDTA?

22. What are pseudo halogens? Describe their formation and characteristics.

23. a. Discuss the photochemical reactions of Cl_2 and CH_4. (7)
    b. What is meant by photosensitization? Give an example. (3)

24. a. Discuss the position of rare gases in periodic table. (5)
    b. Write a note on clathrates. (5)

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