B.Sc. DEGREE EXAMINATION,APRIL 2020
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. Write the electronic configuration of halogens.
2. Mention the peculiar properties of fluorine.
3. What are noble gases?
4. Mention the uses of noble gases.
5. Give the nucleophilic addition of carbonyl compounds.
6. Write wittig reaction.
7. State Grothus-Draper law.
8. What is meant by quantum yield?
9. Distinguish between fluorescence and phosphorescence.
10. Mention the conditions of precipitation.
11. What is meant by precipitation with homogeneous solution?
12. What are sequestering agents?

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

Answer any **FIVE** questions

13. What are pseudo halogens? Explain the properties and structure of cyanogen.
14. Discuss the position of rare gases in periodic table.
15. Explain the reactivity of carbonyl compounds.
16. Explain the reaction mechanism of Benzoin condensation.
17. Write short notes on i) Photosensitization ii) Quenching
18. Distinguish co-precipitation and post precipitation.
19. State and explain Lambert-Beer's law.

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

Answer any **THREE** questions

20. (a) Discuss the similar properties of Halogens. (4)
    (b) What are Inter-Halogen compounds? Discuss the preparation and structure of ClF and IF_5. (6)
21. Discuss the preparation, and properties and uses of
    (a) XeF_4 (b) clathrates (5+5)
22. Explain the reaction mechanism of the following:
    (a) Aldol condensation (b) Knovenagal condensation (c) Perkins reaction. (3+3+4)
23. (a) Explain the photo chemical reaction of chlorination of methane. (5)
    (b) Discuss the role of photochemical reactions in biochemical process (5)
24. (a) Explain the principle of gravimetric analysis. (3)
    (b) What are selective precipitants? Explain selective precipitants with examples. (7)

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