B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
II Year III Semester
General Chemistry - VII

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

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

Answer any **TEN** questions

1. Write the Lewis structure for the following a. NO_2^- b. N_2O_3
2. List three industrial uses of arsenic.
3. Complete and balance the following equations

   i. $S_2O_8 + 3I^- \overset{Ag+}{\rightarrow}$
   ii. FeS + $O_2 \rightarrow$
4. How is aqueous iodine solution prepared?
5. How does water react with XeF_6?
6. Suggest a method of preparing XeF_4BiF_5.
7. Define isoelectric point.
8. Mention the uses of pyrogallol.
9. Which are the foods high in glycine?
10. How is succinic acid prepared?
11. What is the order of acidic strength among phenol, catechol, resorcinol and hydroquinone?
12. Write Lederer – Manasse reaction.

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

Answer any **FIVE** questions

13. How is hydroxyl amine prepared? Explain its properties.
14. Write a short note on the exceptional properties of fluorine.
15. Discuss the mechanism of sulphonation.
16. What are essential and non-essential amino acids? Give example for each type.
17. What are the forms of oxoacids of sulphur? Draw the structure of dithonic acid and peroxodisulphuric acid.
18. How is nitro phenol prepared? Discuss is chemical properties.
19. What is a clatharate? Explain clathrate formation by noble gases.

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

Answer any **THREE** questions

20. What are pseudo halogens? Describe their formation and characteristics.
21. a. Explain the stability of substituted phenols. (5)
    b. How is beta naphthol prepared? Mention its uses. (5)
22. Describe the chemistry of XeF_2, XeF_6 and $Xeof_4$.
23. Explain the following
    i. Riemer – Tiemann reaction
    ii. Gattermann reaction
    iii. Houben – Hoesh reactions reaction
    iv. Zwitter ion (3 + 3 + 3 + 1)
24. Give the comparative study of se and Te (5) b. Write a method of preparation of meta creasol? Mention its properties. (5)

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