

This question paper contains 3 printed pages]

Y—28—2019

FACULTY OF SCIENCE

B.Sc. (Fifth Semester) (Backlog) EXAMINATION

OCTOBER/NOVEMBER, 2019

(CBCS Pattern)

CHEMISTRY

Paper XII

(Organic and Inorganic Chemistry)

(Friday, 15-11-2019)

Time : 10.00 a.m. to 12.00 noon

Time—2 Hours

Maximum Marks—40

N.B. :— (i) Use same answer-book for Section A and Section B.

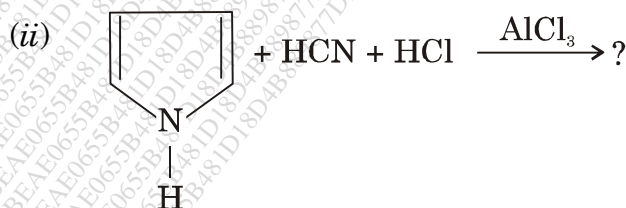
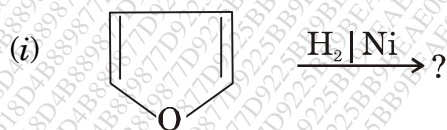
(ii) Attempt All questions.

Section A

(Organic Chemistry)

1. Answer any *five* of the following : 5×2=10

- (a) Write resonance structure of thiophene.
- (b) How will you prepare pyridine from acetylene ?
- (c) Explain the term Antidibetics and Antibiotics. Give *one* example of each.
- (d) Write the structural formula of Vitamin C. Mention its source and diseases caused by its deficiency.
- (e) Predict the product(s) :



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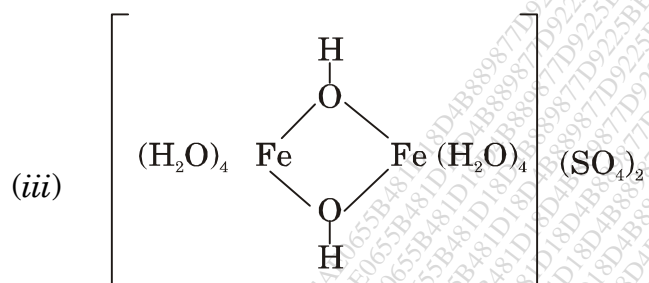
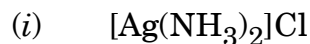
- (f) Explain basic character of pyridine.
- (g) Write Fischer indole synthesis.
- (h) Define the following terms with *one* example each :
- (i) Sedatives
 - (ii) Rodenticides.
2. Answer any *two* of the following : 2×5=10
- (a) Explain the synthesis and uses of the following drugs :
- (i) Sulphadiazine
 - (ii) Tolbutamide
- (b) Give the synthesis and uses of the following pesticides :
- (i) DDT
 - (ii) Carbaryl
- (c) How will you convert :
- (i) Furan to 2-Nitrofurran
 - (ii) Pyrrole to Pyrrole-2-Sulphonic acid
 - (iii) *n*-butane to thiophene.
3. Answer any *one* of the following : 1×7=7
- (a) Explain qualities of good dye and write Witt's theory, Armstrong's theory of colour and chemical constitution.
- (b) Discuss the chemical constitution of Ephedrine.

Section B

(Inorganic Chemistry)

4. Solve any *three* of the following : 3×3=9
- (a) What are the postulates of Werner's theory of coordination ?
- (b) Define ligands and give their classification with suitable example.
- (c) Explain in detail gold complexes for the treatment of rheumatoid arthritis.

(d) Give the IUPAC name of the following coordination compounds :

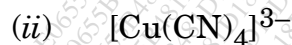


(e) Write a short note on Imaging agents.

5. Solve any *two* of the following : 2×2=4

(a) What are coordination isomerisms ? Give its suitable example.

(b) Calculate EAN of :



(c) Distinguish between Double salt and Coordination compound.

(d) What is cancer ?