

Total No. of Questions :6]

SEAT No. :

P1916

[Total No. of Pages : 3

[5323] - 412

M.Sc. - II

ORGANIC CHEMISTRY

CHO - 452 : Carbohydrates, Chiron Approach, Chiral Drugs and
Medicinal Chemistry

(2013 Pattern) (Semester - IV)

Time : 3 Hours]

[Max. Marks :50

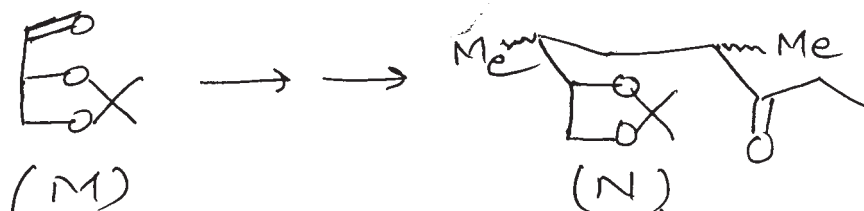
Instructions to the candidates:

- 1) All questions are compulsory.
- 2) Figures to the right indicate full marks.
- 3) Answers to the two sections should be written in separate answer-books.

SECTION - I

Q1) a) Complete the following sequence from (M) to (N).

[10]



Describe the role of ethyl magnesium bromide in this sequence.

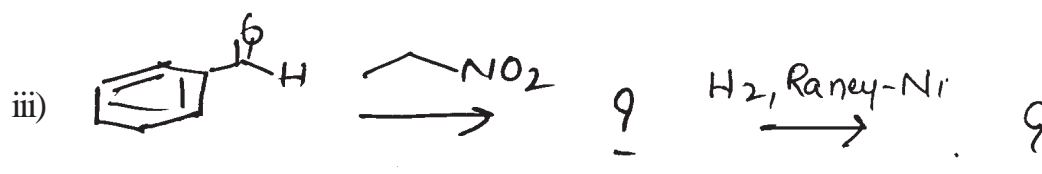
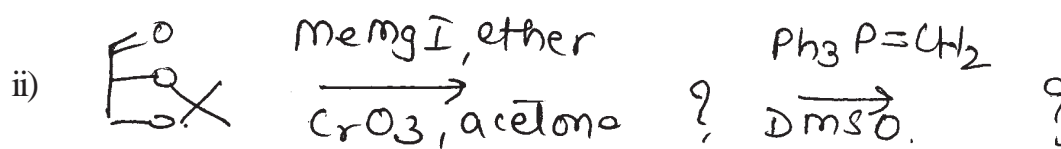
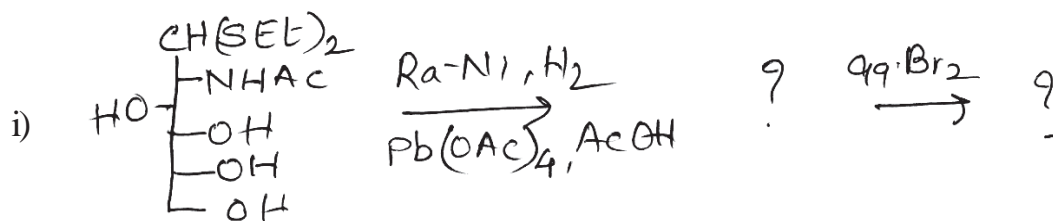
- b) Write a short note on “anomeric effect”.
- c) Define the term ‘Eutomer’ and explain with suitable examples.
- d) Write the retrosynthesis of (–) – multistriatin using hexose.
- e) Write adverse effects of s- metoprolol.

P.T.O.

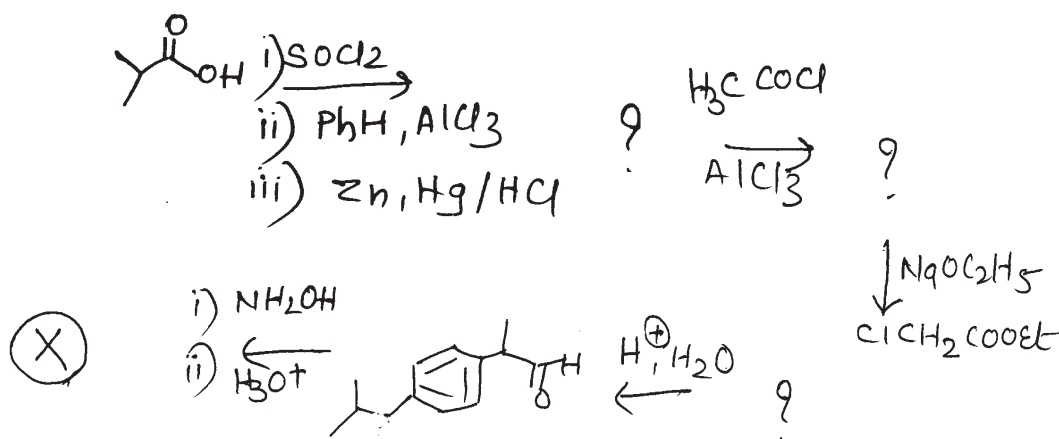
Q2) a) Answer any two of the following. [6]

- Write the pharmacological activities of Ephedrine.
- How will you convert D - mannitol into (R) - Epichlorohydrin.
- Describe the role of oxidation studies using HIO_4 in carbohydrate chemistry.

b) Identify the intermediates formed in any two of the following sequence of reactions and rewrite the sequence again. [4]



Q3) Complete the following sequence using appropriate reagents.



Comment on optical activity of compound (X) formed in the sequence of reactions.

How will you convert it into optically active (S) - Ibuprofen? [5]

SECTION - II

Q4) Answer the following. [10]

- a) Explain the term broad spectrum antibiotics with suitable example.
- b) What is ADME in drug design?
- c) What are anti metabolites?
- d) Give SAR of Chloramphenicol.
- e) Give an account of history of antibiotics.

Q5) a) Answer any two of the following. [6]

- i) Name any two antifungal agents and explain their mode of action.
- ii) Write note on protein synthesis inhibitor antibiotics.
- iii) Discuss in brief antiviral agents and selective toxicity.

b) Explain the following (any two). [4]

- i) Chloroquine as antimalarial agent.
- ii) Macrolides as antibiotics.
- iii) SAR of tetracyclins.

Q6) What are β - Lactum antibiotics? How they act as cell wall inhibitors? Give examples of semisynthetic penicillins. [5]

