

Total No. of Questions : 6]

SEAT No. :

P1429

[5049]-104

[Total No. of Pages :4

F.Y.B.Pharmacy

PHARMACEUTICAL ORGANIC CHEMISTRY-I

(2013 Pattern) (Semester-I)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

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

SECTION-I

Q1) What are Elimination Reactions? Discuss the mechanism, stereochemistry, kinetics and orientation involved in Elimination Reaction. **[10]**

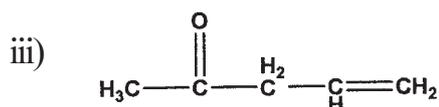
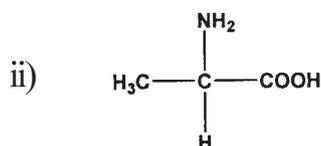
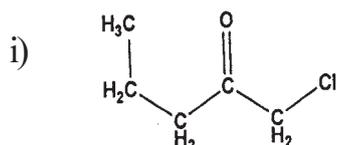
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Explain in brief about factors affecting electron availability with suitable examples.

Q2) Solve any five:

[15]

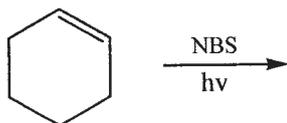
a) Give the IUPAC name of the following compounds



b) Define and illustrate Resonance Effect.

P.T.O.

c) Predict the product and give the mechanism.



d) What is necessary condition for optical isomerism?

e) Draw as many Resonance Structures as you can for following

i) Toluene

ii) Nitro Benzene

f) Explain SP^3 Hybridization of Carbon.

g) 1,2- addition product predominates at a low temperature in electrophilic addition reactions in conjugated dienes. Explain.

Q3) Answer the following (any two): **[10]**

a) Explain Optical Isomerism of Tartaric Acid

b) Explain Chemical Properties of Alkanes

c) Explain orientation & Reactivity in monosubstituted benzene.

d) Explain Mechanism & Regioselectivity in addition reaction of alkenes with respect to oxymercuration-demercuration.

SECTION-II

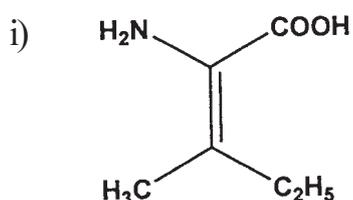
Q4) Explain Reaction & Mechanism of hydrogenation & Halogenation with C-C multiple bond. **[10]**

OR

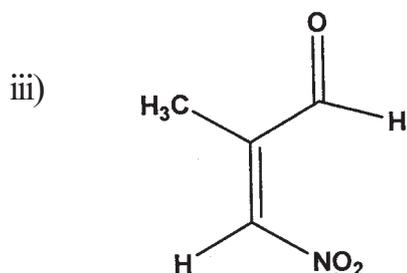
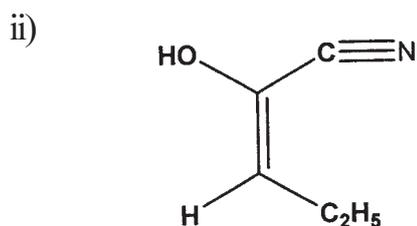
What is Huckel's rule for aromaticity? Explain aromatic electrophilic substitution reaction in benzene with respect to sulphonation and Halogenation.

Q5) Solve any five: **[15]**

a) Establish E & Z configurations



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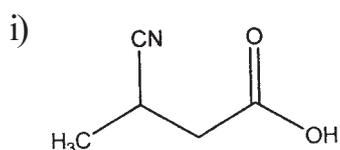
- b) Explain hybridization of atomic orbitals of Oxygen.
- c) Define the following terms and give suitable examples of each:
- i) Activating group
 - ii) Deactivating group
 - iii) Ortho and para director
- d) Enlist three examples of Electrophiles & Nucleophiles.
- e) Define and illustrate Geometric Isomerism.
- f) Explain Distereoisomerism with suitable example.
- g) Compare the stability of primary, secondary and tertiary Carbanion.

Q6) Answer the following (any Two):

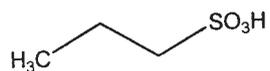
[10]

- a) Write a note on Diels- Alder reaction
- b) Give General methods of preparation and reactions of Alkenes.
- c) Explain Mechanism of nucleophilic aromatic substitution reaction.
- d) What are the names of following compounds in the IUPAC system?

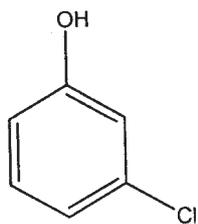
(any five)



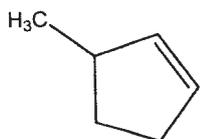
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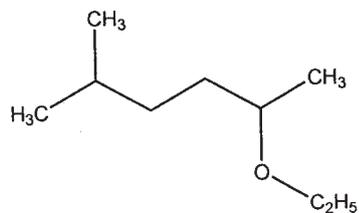
iii)



iv)



v)



vi)

