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Total No. of Pages : 02

Total No. of Questions : 10

B.Pharmacy (Sem.-2)

PHARMACEUTICAL CHEMISTRY-III (ORGANIC CHEMISTRY-I)

Subject Code : PHM-124

M.Code : 46118

Time : 3 Hrs.

Max. Marks : 80

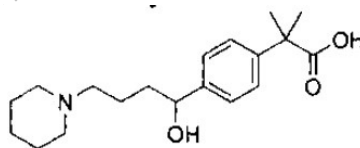
INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of FIFTEEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains FOUR questions carrying TEN marks each and students have to attempt any THREE questions.

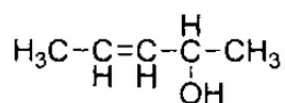
SECTION-A

I. Write short notes on :

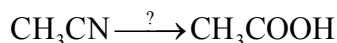
- a) What do you mean by bond dissociation energy?
- b) Why *p*-nitro phenol does have higher boiling point than *o*-nitrophenol.
- c) Why hydrocarbons dissolve in benzene while alkyl halide dissolve in solvent like chloroform or carbon tetrachloride.
- d) Define diastereoisomerism with one example.
- e) How many chiral centres are present in the following structure :



- f) Define meso compounds with one example.
- g) Why is phenol acidic in nature?
- h) Give IUPAC name of the following

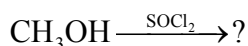


- i) Complete the following reaction :



- j) How do protic solvents differ from aprotic solvents?

- k) Complete the following reaction :



- l) Define Bronsted-Lowry acid and base.
- m) Explain Reimer-Tiemann reaction with one example.
- n) Give Huckel's rule with example.
- o) Comment on stability of carbon free radical.

SECTION-B

2. Explain various types of hybridization in organic molecules citing suitable examples.
3. Write a note on factor affecting the solubility of organic molecules.
4. Compare with reason, optical inactivity in meso compounds with that of racemic modification.
5. Discuss the orbital picture of benzene.
6. Compare the reactivity of aldehydes and ketones towards the nucleophilic addition.

SECTION-C

7. Explain the stability, formation and geometry of carbanion and carbene reaction intermediates.
8. Describe the reactions of phenol.
9. Describe the $\text{S}_\text{N}1$ and $\text{S}_\text{N}2$ mechanism of nucleophilic substitution reaction in alkyl halide with special emphasis on stereochemistry.
10. Compare the chemical reactions of alcohol and ether.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.