

NTK/KW/15/6976

B. Pharm. (Second Semester) (C.B.S.) Examination
PHARMACEUTICAL CHEMISTRY—II (2T2)
(Organic)
Paper—2

Time—Three Hours]

[Full Marks—80

N.B. :— (1) Question No. 1 is compulsory.

(2) Solve any **FOUR** questions from the remaining.

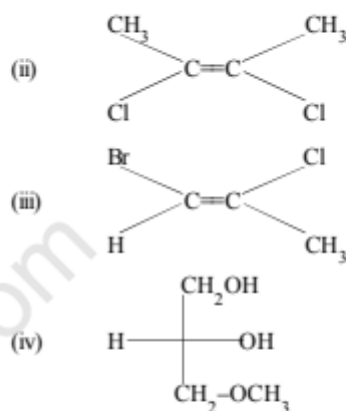
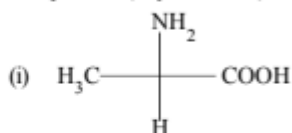
(3) Draw neat labeled diagram wherever necessary.

1. Solve any **FIVE** of the following :

- Give sources of organic compounds with examples.
- Write a short note on sequence rule.
- Cis-trans isomerism.
- Explain role of electronegativity in polarity of bond.
- Define and classify amines with examples.
- Define hybridization and classify them.
- Differentiate between Configuration and Conformation.

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2. (a) What are racemic mixtures ? Explain various methods of resolution of racemic mixture. 8
(b) Explain Dumas method for determination of Nitrogen. 7
3. Justify the following statements (any **THREE**) :
(a) Acetic acid is acidic in nature.
(b) Melting point of inorganic compound is higher than organic compound.
(c) Trans-isomers are more stable than cis-isomers.
(d) Chair conformation of cyclohexane is more stable than boat. 15
4. (a) What is meant by conformers ? Discuss various conformations existing in n-butane along with energy profile diagram. 8
(b) Explain Lassaignes test for detection of elements in organic compounds. 7
5. (a) Give brief account on hydrogen bonding and explain its effect on aqueous solubility and bond lengths. 9
(b) Assign suitable configuration to following organic compounds (any **THREE**) :



6. (a) Define and classify alcohols with suitable examples. How is differentiation between primary, secondary and tertiary alcohols carried out ? 9
(b) Draw structure of following compounds (any **THREE**) :
(i) 1, 3, 5-tribromo benzene
(ii) 2-cyclopenten-1-ol
(iii) Ethyl, methyl amine
(iv) 3-chloro butanal. 6
7. (a) What is meant by optical activity ? Explain conditions for optical activity. What is meant by specific rotation and how can one measure it ? 8
(b) Explain various types of organic reactions with an example from each class. 7