

2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

IV B.TECH ISEMESTER REGULAR EXAMINATIONS

ORGANIC CHEMISTRY
(CHEMICAL ENGINEERING)

APRI/MAY 2006

TIME : 3HOUR
MARK :100**ANSWER ANY FIVE QUESTIONS ALL QUESTIONS CARRY EQUAL MARKS**

1. (a) Explain the following applications of Inductive effect
 - i. Effect of bond lengths
 - ii. Dipole moment
 - iii. reactivity of alkyl halide(b) Discuss the strength of carboxylic acid based upon Inductive effect.
2. What is alkylation and acylation? Give at least three different examples of each.
3. (a) Formulate and give mechanism for the addition reaction of water to isobutylene in the presence of H₂SO₄.
(b) How do you carry out anti-Markonikoff addition of water to isobutylene? Give mechanism for this reaction.
4. Explain the following
 - (a) Chiral center
 - (b) Plane polarised light
 - (c) Meso compound
 - (d) Conformational isomers
5. How will you assign E-Z notations to geometrical isomers? Explain with suitable examples.
6. (a) Explain the difference between natural rubber and gutta percha.
(b) Write briefly on
 - i. Wool and
 - ii. Silk.
7. (a) Explain the aromaticity of pyrrole, furan and thiophene.
(b) How does pyridine react with the following?
 - i. HI at 300°C.
 - ii. Sodium in C₂H₅OH
 - iii. Sodamide in liquid ammonia.
8. Explain what are
 - (a) Direct dyes
 - (b) Mordant dyes
 - (c) Vat dyes.
 - (d) Ingrain dyes with examples
