Reg. No.										

Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)

III SEMESTER B.TECH END SEMESTER EXAMINATIONS, NOV/DEC 2015

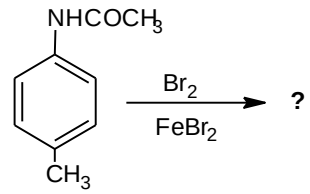
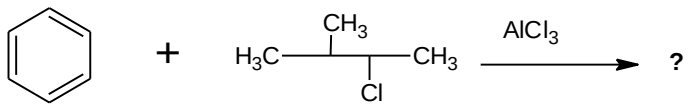
SUBJECT: ORGANIC CHEMISTRY [CHM 2101]

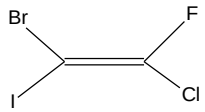
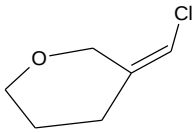
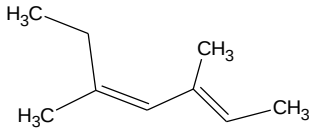
REVISED CREDIT SYSTEM

Time: 3 Hours MAX. MARKS: 50

Instructions to Candidates:

- Answer **ALL** the questions.
- Missing data may be suitable assumed.

1A.	i. a. Explain the different factors affecting the stability of a carbanion. b. Differentiate between auxochromes and chromophores ii. Explain hemolytic fission and heterolytic fission.	**5**
1B.	Explain the following terms: a. Meso compound b. Fluorescent brightening agent c. Polarimeter	**3**
1C.	Describe the mechanism involved in the nitration of nitrobenzene	**2**
2A.	Describe in detail the theories which explain relation between color and constitution.	**5**
2B.	i. Describe in mechanism of bromination of benzene. ii. Predict the product/s in the following and explain your reasoning. a.  b. 	**3**
2C.	Describe the structure, stability and two reactions of free radicals.	**2**
3A.	i. a. Explain the mechanism of Friedel Crafts acylation. b. Describe the structure and synthesis of malachite green. ii. Explain syn and anti nomenclature system.	**5**

3B.	Assign the double bonds in the following molecules as either E or Z by stepwise scheme. 1.  2.  3. 	**3**
3C.	Explain metamerism and tautomerism using suitable examples.	**2**
4A.	What is Mutarotation? Explain with the help of an example. Discuss the elucidation of the open chain structure of Fructose.	**5**
4B.	Give the synthesis of the followings; i. Strecker synthesis ii. Wohl's reaction	**3**
4C.	Discuss in brief the effect of substituents on the acidity of manocarboxylic acids.	**2**
5A.	What are proteins? How are proteins classified? Discuss the structure of Protein.	**5**
5B.	i. Explain Fischer-indole synthesis. Mention the physical properties of indole. ii**.** What is barbital? Describe its synthesis.	**3**
5C.	Explain the following terms; a. Activators b. Isoelectric point	**2**

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