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SE-8049

B. E. (Sem. III) (Chem.) Examination

May / June – 2011

Organic Chemistry & Unit Process

(New Course)

Time : 3 Hours] [Total Marks : 100

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ B. E. (Sem. 3) (Chem.)

Name of the Subject :

☛ Organic Chemistry & Unit Process (New)

☛ Subject Code No. : 8 0 4 9 ☛ Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

(1) Attempt all Questions.
(2) Give flow charts and neat diagrams wherever necessary.
(3) Write clearly number of questions and subquestions attempted.
(4) Figures to the right indicate full marks.

Q.1 (a) Fill in the blanks: **10**

1. _____ bond is formed by the sharing of electrons.
2. _____ and _____ are classification of the structural isomerism.
3. Colour's intensity increase is known as _____effect and decrease is known as _____ effect.
4. _____ and _____ process are used for preparation of synthetic petrol.
5. _____, _____ and _____ are Heteroatoms.

(b) Define the following: **10**

1. Chromophore and Auxochrome.
2. Halogenation and Hydrolysis.
3. Homolytic and Heterolytic fission.
4. Starch and cellulose.
5. Aryl and Alkyl compounds.

Q.2 Answer any Three: **15**

1. Explain preparation of "Synthetic Petrol" by Fischer-Tropsch process.
2. Describe Sulphonation.
3. Discuss physical and chemical properties of Benzene.
4. What is amination by reduction? Discuss various chemical and physical factors affecting an amination by reduction.

Q.3 **Answer any Five:** 15

1. Explain Geometrical isomerism with example of tartaric acid.
2. What is Grignard reagent ? Explain preparation and uses of Organomagnesium compounds.
3. Describe continuous preparation of nitrobenzene with Biazzi nitrator.
4. Write the chemistry of Formaldehyde.
5. Explain preparation and uses of Chloroform.
6. Write the mechanism of Halogenations of Chlorine.

Q.4 **(a)** **Short answer question:** 10

1. What is Elastomer ?
2. What do you meant by Aminoacid ?
3. What is Chain polymerization?
4. Explain Saccharides.
5. Define Polynuclear Organic compound.

b. **Define the following:** 10

1. Dextrose and Lactose.
2. Oxidation and Reduction.
3. Carbonium ion and Carbanion.
4. Soaps and Detergents.
5. Polymer and Polymerization.

Q.5 **Answer any Three:** 15

1. Write Preparation, properties and uses of Fructose.
2. Explain Sulphonation of naphthalene with two suitable examples.
3. Discuss about chemical reaction, properties and uses of Phenol.
4. Explain preparation and uses of Polyisoprene.

Q.6 **Answer any Five:** 15

1. Conversion of Aldohexose into Aldopentose.
2. Explain preparation and uses of six member ring of heterocyclic compound.
3. Write reaction and mechanism of Canninzaro reaction.
4. Discuss the resonance and properties of Carboxylic acid.
5. Explain Michael reaction with application.
6. Describe the structure and uses of Starch.