



SE-6123

B. E. - II (Sem. III) (Chemical) Examination

April / May - 2011

**Engineering Chemistry - II
(Organic Chemistry)**

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशांशिक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. - 2 (SEM. 3) (CHEMICAL)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Engineering Chemistry - 2"/>	<input type="text"/>
Subject Code No. : <input type="text" value="6"/> <input type="text" value="1"/> <input type="text" value="2"/> <input type="text" value="3"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="NIL"/>	
Student's Signature	

1. Give reactions and neat diagrams wherever necessary.
2. Question 1 and 4 are compulsory and carries 20 marks each.
3. Question 2, 3 and 5, 6 are of 15 marks each.

- Q.1(a) Short Answer Question 10
1. Define Stereoisomerism.
 2. Explain Sublimation.
 3. List different Nitrating agents?
 4. Explain different types of Acids.
 5. Explain Markonikoff's rule.
- (b) Explain Kjeldahl's method for estimation of Nitrogen. 5
- (c) Write two general preparation, properties and uses of Aniline. 5
- Q.2 Answer any Three. 15
1. Describe Optical isomerism.
 2. Write the preparation, properties and uses of Benzaldehyde.
 3. Explain the different rules for naming an organic compound through IUPAC Nomenclature of heterocyclic and alicyclic compounds.
 4. Write preparation, properties and uses of Succinic acid.
 5. Explain Carbonium ion and Carbanion with mechanism.

- Q.3 Answer any Three 15
1. Explain the importance of Mesomeric effect with special reference to resonance in an organic compound.
 2. Distinguish between Aldehydes and Ketones.
 3. Explain Nucleophilic Substitution and Electrophilic addition reactions.
 4. Discuss carius method for determination of Sulphur.
 5. Write the preparation, properties and uses of Chloroform and Carbon tetrachloride.
- Q.4(a) Short Answer Questions: 10
1. Define Meso compounds.
 2. Explain Fractional crystallisation.
 3. Write different test to identify N, S, & Halogen in an organic compound.
 4. Discuss Homolytic and Heterolytic fission.
 5. Define Specific rotation?
- (b) Give reactions of different compound form after using Grignard reagent. 5
- (c) Explain with mechanism halogenation and nitration reaction. 5
- Q.5 Answer any Three. 15
1. Write preparation properties and uses of Phthalic acid.
 2. Explain Functional and Positional isomerism in detail with two examples.
 3. Write Preparation, Properties and uses of diphenyl amine and dimethyl aniline.
 4. Write in detail about Steam distillation.
 5. Distinguish with test different types of amines.
- Q.6 Answer the following.
1. Discuss Organometallic compound. Write the formation of Organo Zinc and Organo Lead compound and discuss in detail some important chemical reaction of it. 9
 2. Explain different reactions to identify the presence of Acid, Phenol and Base in an organic compound. 6
- OR
2. Give the structural formula of following:
 - a. Oxalic acid
 - b. Glycerine.
 - c. Cinnamaldehyde.
 - d. Iodoform
 - e. Benzyl chloride
 - f. Diethyl ether.
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