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SE-8139
B. E. - II (Sem. III) (T.P.) Examination
May / June – 2011
Organic Chemistry

Time : 3 Hours] [Total Marks : 100

Instructions :

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

Name of the Examination :
☛ B. E. - 2 (SEM. 3) (SEM. 3) (T.P.)

Name of the Subject :
☛ Organic Chemistry

☛ Subject Code No. : 8 1 3 9 ☛ Section No. (1, 2,.....) : NIL

Seat No. :

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 Aufbau Principle.
2. Explain the utility of Protic Solvent.
3. Alcohols are used as a reagent for several reactions. Explain?
4. Difference between Aldehydes and Ketones.
5. Explain Reaction mechanism.

(b) Explain the general aspect for determination of Schrodinger Wave equation. **5**

(c) Write two general preparation, properties and uses of Phenols. **5**

Q.2 Answer any Three. **15**
1. Describe Ionic and Covalent bond.
2. Explain S-S, S-P and P-P overlappings.
3. Explain Protic and aprotic solvents.
4. Write preparation, properties and uses of Nitro compounds.
5. Explain Nucleophilles and Electrophilles.

Q.3 Answer any Three **15**
1. Explain the importance of Inductive effect with special reference to electro negativity of electron withdrawing groups.
2. Distinguish between Alcohols and Phenols.
3. Explain Nucleophillic addition and Eletrophillic substitution reactions.
4. Write in detail about Aromatic Halides.
5. Write the preparation, properties and uses of Nitrile compounds.

Q.4(a) Short Answer Question **10**

1. Define Plane Polarized light.
2. Explain Polynuclear Hydrocarbons.
3. Distinguish Aromatic and Heterocyclic compounds.
4. Aromaticity of any compounds is due to?
5. Optical isomerism of any compound is responsible due to?

(b) Heterocyclic compounds are aromatic in nature? Discuss. **5**

(c) Write two general properties, preparation and uses of Esters. **5**

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

1. Write preparation properties and uses of aromatic acids.
2. Explain Positional and Functional isomerism in detail with two examples.
3. Writer Preparation, Properties and uses of Furan.
4. Write preparation, properties and uses of Thiophene.
5. Distinguish Geometrical and Structural isomerism.

Q.6 Answer the following.

1. Write the preparation, properties and uses of Naphthalene in detail. **9**
2. Show the mechanism in organic reactions. **6**

OR

2. Explain: (a) Steam distillation (b) Crystallisation.