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KC-8138

B. E. II (Sem. III) (T. P.) Examination

November / December – 2012

Organic Chemistry

(New Syllabus)

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. II (SEM. III) (T. P.)

Name of the Subject :

☛ ORGANIC CHEMISTRY (NEW)

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

Seat No. :

Student's Signature

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

1(a) Short Answer Question **10**

1. Define Atomic orbital.
2. Give the electronic configuration of He (Helium), Sc (Scandium).
3. Explain the presence of Carbon in Organic compound.
4. Difference between Esters and Acids.
5. Explain different types of fission.

(b) What is unshared pair of Electrons? Explain with examples showing the deformation in shape and angle of molecules. **5**

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

2 Answer any Three. **15**

1. Write the preparation, properties and uses of Phenols.
2. Explain the formation of molecular orbital with different principles.
3. Explain the formation of Primary, Secondary & Tertiary Alcohols.
4. Write preparation, properties and uses of Ethers.
5. Explain different types of reactive intermediates.

3 Answer any Three **15**

1. Explain the importance of Electromeric effect in organic reaction.
2. Define Quantum number and the formation of it through it with the help of energy equation.

3. Explain Nucleophillic Substitution and Elecrtophillic addition reactions.
4. Write in detail about Nitrile Compound.
5. Describe formation of Ionic bonds with examples

4(a) Short Answer Questions: **10**
1. Define Meso form of isomerism in Tartaric acid.
2. Give the classification of Isomerism.
3. How the presence of N, S and Halogen can be proved in organic compound identification.
4. Define Crystallisation.
5. Optical isomerism of any compound is due to?

(b) Explain with qualitative test the separation of Acids, Alcohols, Phenols and Basic compounds? **5**

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

5 Answer any Three. **15**
1. Write preparation properties and uses of Aliphatic halides.
2. Explain Keto Enol tautomerism with examples.
3. Write Preparation, Properties and uses of Furan
4. Write preparation, properties and uses of Quinoline.
5. Explain the optical isomerism of Lactic acid.

6 Answer the following.
1. Write the preparation, and uses of Naphthalene in detail. **9**
2. Explain Optical Isomerism. **6**

OR

2. Explain: (a) Sublimation (b) Steam Distillation. **6**