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UF-6291

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

May/June – 2012

Organic Chemistry

(As Per Old 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 (Old Course)**

☛ Subject Code No. : **6 2 9 1** ☛ 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) Questions 2, 3 and 5, 6 are of 15 marks each.

1 (a) Short answer questions **10**

(1) Define reactivity of an organic compound.

(2) Define covalent bond.

(3) Define atomic orbital.

(4) Difference between alcohols and phenols.

(5) Define Hund's principle.

(b) Explian sp^1, sp^2 and sp^3 types of hybridization. **5**

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

2 Answer any three. **15**

(1) Describe electrophiles and nucleophiles.

(2) Explain overlappings.

(3) Explain the usage of solvents in organic reaction.

(4) Write preparation, properties and uses of cyano compounds.

(5) Explain plane polarised light, enatiomers and optical resolution.

3 Answer any three. **15**

(1) Explain the importance of electromeric effect with special reference to unsaturated compound.

(2) Explain different types of organic reactions.

(3) Explain electrophillic substitution and addition reactions.

(4) Write in detail about Aromatic acids.

(5) Write the preparation, properties and uses of ethers.

4 (a) Short answer questions. **10**

(1) Define dipole moment.

(2) Classify heterocyclic compound.

(3) Distinguish aldehyde and ketone.

(4) Is polynuclear compound aromatic in nature ?

(5) Polarimeter is used for ?

(b) Explain gas chromatography. **5**

(c) Define aromaticity and explain the aromaticity in heterocyclic compound. **5**

5 Answer any three. **15**

(1) Write preparation properties and uses of amines.

(2) Explain structural isomerism.

(3) Write preparation, properties and uses of furan.

(4) Write preparation, properties and uses of pyrrole.

(5) Explain the optical isomerism of tartaric acid.

6 Answer the following.

(1) Write the preparation, properties and uses of naphthalene in detail. **9**

(2) Explain different of qualitative test to identify organic molecule. **6**

OR

(2) Explain : **6**

(a) Simple distillation.

(b) Fractional crystallization.