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**SUBJECT CODE NO: - Y-2002**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**B.Sc. F.Y (Sem-I)**  
**Examination March / April - 2023**  
**Chemistry Paper-II (Organic Chemistry)**

[Time: 1:30 Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N. B

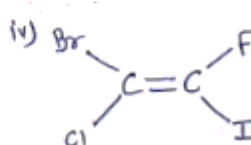
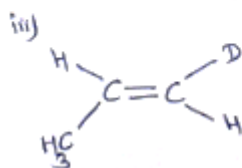
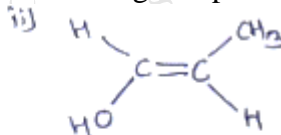
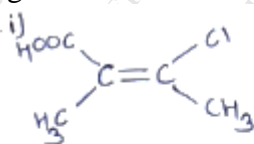
- 1) Attempt all the question
- 2) All questions are compulsory.

- Q1 a) Explain Inductive effect and steric effect with Suitable example. 10  
 b) Explain different types of organic reactions with examples 10

**OR**

- a) i. Discuss localised and delocalised chemical bond with example 05  
 ii. Explain hydroboration reaction of alkene with mechanism 05  
 b) Define electrophiles and nucleophiles and- discuss with suitable example 10

- Q2 a) Assign E or Z nomenclature to the following compound. 10



- b) i. Explain any two methods of preparation of alkene 05  
 ii. Explain Sulphonation reaction of benzene with mechanism 05

**OR**

Write short notes on (any four) 20

- a) D-L System of nomenclature
- b) Enantiomer
- c) Nitration of alkanes
- d) Saytzeff rule
- e) Friedel craft acylation
- f) Any two methods of preparation of aryl halides.

Q3 choose and write the correct answer of following

10

- Which of the following compounds has localized bonding?  
a) Benzene      b) 1, 3 – butadiene      c) conjugated alkene      d) methane
- Homolytic fission of a compound results in formation of  
a) Carbocation      b) Carbanion      c) free radical      d) Carbene
- Which of the following is an electrophile?  
a)  $CH_3O^-$       b)  $CH_3CH_2^+$       c)  $NH_3$       d)  $CH_3CH_2^-$
- Plane polarized light is affected by \_\_\_\_\_  
a) Identical molecules      b) chiral molecules      c) Both a & b      d) none of these
- Optical isomers that are not mirror images are called \_\_\_\_  
a) Diastereomer      b) Meso Compound      c) Enantiomer      d) Metamer
- The thermal decomposition of alkane in the absence of air is called \_\_\_\_  
a) Cracking      b) Hydrogenation      c) Combustion      d) Oxidation
- Ethylene is obtained from ethyl bromide by \_\_\_\_\_  
a) Simple heating  
b) Hydrolysis  
c) Dehydrohalogenation  
d) Nucleophilic Substitution
- The disappearance of purple colour of  $KMnO_4$  Solution on reaction with alkene is known as \_\_\_\_\_  
a) MARKownikoff's test  
b) Bayers test  
c) Grignard test  
d) None of these
- Benzene reacts with chlorine in the presence of  $FeCl_3$  Catalyst to form.  
a) Chlorobenzene  
b) Bromobenzene  
c) Hexachlorobenzene  
d) Hexachlorocyclohexane
- Chlorination of  $C_5H_2$  gives \_\_\_\_\_  
a)  $CS_2Cl_2$       b)  $COCl_2$       c)  $CHCl_3$       d)  $CCL_4$