



17340

21415

3 Hours/100 Marks

Seat No.

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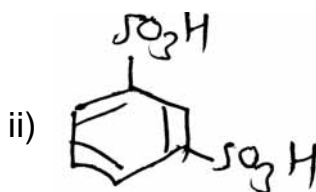
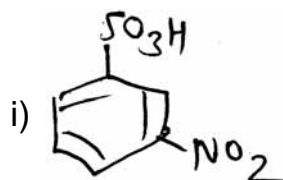
- Instructions:** (1) **All** questions are **compulsory**.
(2) Illustrate your answers with **neat** sketches **wherever** necessary.
(3) Figures to the **right** indicate **full** marks.

MARKS

1. Answer **any ten** :

20

- Define Aryl Halides. Give example.
- Write functional group in Aryl diazonium ion. Also write structure of benzene diazonium chloride.
- Explain Aliphatic compounds and Aromatic compounds.
- Write sulphonation reaction in case of Aniline.
- Name the compounds :



- Explain how m-dinitrobenzene is prepared from nitrobenzene.
- Write resonating structures of Naphthalene.
- Explain Anthraquinone. How is it prepared ?
- Write structure of :
 - Phenolphthalein
 - Picric acid.

P.T.O.



- j) Convert Aniline into m-Nitro aniline.
- k) Write physical properties of Toluene.
- l) Write uses of Benzoic acid.

2. Answer **any four** :

16

- a) Explain how is chlorobenzene prepared by direct Halogenation. Also write uses of chlorobenzene.
- b) Explain following reactions in case of Toluene :
 - i) Catalytic Hydrogenation
 - ii) Friedel craft alkylation.
- c) Explain preparation of Nitrobenzene from Benzene with mechanism.
- d) Write chemical reactions of Benzene sulphonic acid with :
 - i) $\text{Br}_2/\text{FeBr}_3$
 - ii) $\text{HNO}_3/\text{H}_2\text{SO}_4/\Delta$
 - iii) Fuming $\text{H}_2\text{SO}_4/200^\circ\text{C}$
 - iv) NaOH .
- e) Write physical and chemical properties of Anthracene.
- f) Write physical properties and uses of Benzene sulphonic acid.

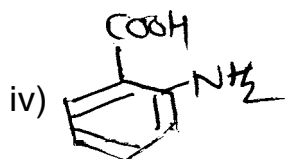
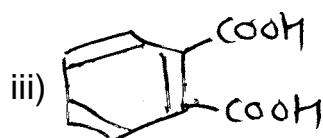
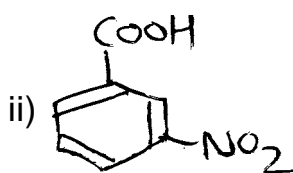
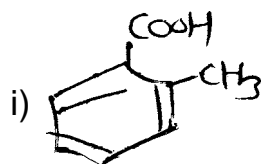
3. Answer **any four** :

16

- a) Explain how is Benzene prepared from :
 - i) Acetylene
 - ii) Phenol.
- b) Explain how is Benzoic acid prepared from :
 - i) Toluene
 - ii) Phenyl Magnesium Bromide.



c) Name the compounds :



d) Write chemical properties of Aniline.

e) Write physical properties of Naphthalene. Also write its uses.

f) Write physical properties and uses of phenol.

4. Answer **any four** :

16

a) Convert :

i) Nitrobenzene to Aniline

ii) Chlorobenzene to Aniline.

b) Write chemical reactions of phenol with :

i) Zn dust

ii) $\text{Br}_2/\text{H}_2\text{O}$

iii) Br_2/CS_2

iv) Conc. HNO_3 .

c) Explain how Alizarin prepared from Anthracene.

d) Explain distillation of coal tar.



- e) Discuss what happens when Benzene is treated with :
- i) Acetyl chloride/ AlCl_3
 - ii) $\text{CH}_3\text{Cl}/\text{AlCl}_3$.
- f) Explain Diazotization reaction.

5. Answer **any four** :

16

- a) Write physical properties and uses of Benzene.
- b) Explain how does benzoic acid react with :
 - i) $\text{HNO}_3/\text{H}_2\text{SO}_4$
 - ii) LiAlH_4
 - iii) PCl_5
 - iv) $\text{C}_2\text{H}_5\text{OH}/\text{H}^+$.
- c) Explain preparation of Benzene diazonium chloride. Also write its uses.
- d) Explain Acidity of phenol.
- e) Write physical and chemical properties of chlorobenzene.
- f) Explain Basicity of Aniline. Also write its resonance hybrid.

6. Answer **any four** :

16

- a) Explain Reduction reaction of Nitrobenzene in acidic, alkaline and neutral medium.
 - b) Convert Benzene into Benzene sulphonic acid. Also write mechanism of the reaction.
 - c) Write physical and chemical properties of benzene diazonium chloride.
 - d) Explain following reactions in case of Naphthalene :
 - i) Nitration
 - ii) Sulphonation.
 - e) Write structure of :
 - i) α -Bromo Naphthalene
 - ii) Anthraquinone.
 - f) Explain how will you show Anthracene has three Benzene rings fused in orthoposition.
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