22363

11819 3 Hours / 70 Marks

Seat No.								
----------	--	--	--	--	--	--	--	--

Instructions : (1) All Questions are *compulsory*.

- (2) Answer each next main Question on a new page.
- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
- (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

1. Attempt any FIVE :

- (a) Name two functional groups and give one example of aromatic compound having the functional group.
- (b) Draw the chemical structures of (i) Anisole (ii) p-nitro aniline.
- (c) Give the preparation method of aniline from benzene.
- (d) Give the preparation method of benzene sulphonic acid from thio phenol.
- (e) Write any four chemical properties of naphthalene.
- (f) What is colour index ?
- (g) Define the term 'substantivity'.

2. Attempt any THREE :

(a) With chemical reactions, explain the preparation of phenol by Dow's process.Give any two chemical properties of phenol.

[1 of 4] P.T.O.

Marks

10

[2 of 4]

- (b) With reactions, write the chemical properties of aniline.
- (c) Write the structures of :
 - (i) H-acid
 - (ii) J-acid
 - (iii) Naphthionic acid
 - (iv) Gamma acid
- (d) Enlist and explain the characteristics of dyes in general.

3. Attempt any THREE :

- (a) Differentiate between aliphatic and aromatic compounds based on their structure. (four points)
- (b) Explain four applications of nitro benzene in dyes synthesis.
- (c) Compare naphthalene with anthracene. (any four chemical properties).
- (d) Describe the term 'pigment'. Classify pigment based on reactive group present.
- (e) Explain the 'witt's theory' of colour in detail.

4. Attempt any THREE :

- (a) With reactions, explain the preparation of benzene from n-hexane and acetylene.
- (b) Write the reactions in the preparation of benzene dizoniuon chloride and write its chemical properties.
- (c) Explain the terms with suitable example :
 - (i) chromophore
 - (ii) auxochrome
- (d) With reactions, explain the different types of dye fibre interaction.
- (e) Enlist the various factors affecting the substantivity of dye. Explain any one.

22363

12

5. Attempt any TWO :

- (a) Select relevant method for coal tar distillation and explain the bi-products generated.
- (b) Explain with neat diagram, the various industrial applications of sulphonic acid & phenol.
- (c) With reactions give the preparation of derivatives of anthracene due to sulphonation process.

6. Attempt any TWO :

- (a) Write the chemical properties of aniline. Give the various methods of preparation of aniline. (any one).
- (b) Explain the general characteristics of dyes.
- (c) Summarise with one example 'effect of fastners properties of dye with its chemical structure'.