

22410

23124

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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) List any four raw materials used for manufacturing of ethanol.
- (b) Write the reaction for production of acetic acid.
- (c) Write any four uses of oil.
- (d) Define polymerization.
- (e) List any four uses of paper.
- (f) Write the molecular structures of poly vinyl chloride and polystyrene.
- (g) Write the reaction involved in manufacturing of phenol in cumene process.

**2. Attempt any THREE of the following :**

**12**

- (a) Describe the importance of thinner and drying oil in paint.
- (b) Write the reaction for manufacturing of polyester.
- (c) Write the raw materials and reaction involved in Rasching Phenol Process.
- (d) Draw process flow diagram for Hydrogenation of oil.



- 3. Attempt any THREE of the following : 12**
- (a) Draw labelled diagram of vinegar generator.
  - (b) Describe Hot process for the manufacturing of soap.
  - (c) Differentiate between lacquers and varnish.
  - (d) Explain manufacturing of pulp by sulphite process.
- 4. Attempt any THREE of the following : 12**
- (a) Describe the cleansing action of soap.
  - (b) Draw process block diagram for manufacturing of paint.
  - (c) Write the reaction involved in Benzene sulfonate process for phenol production.
  - (d) Give any four industrial applications of phenol. Name any two industries manufacturing phenol.
  - (e) Draw process flow diagram for manufacturing of phenol by cumene process.
- 5. Attempt any TWO of the following : 12**
- (a) Draw and explain Kraft process for pulp manufacturing.
  - (b) Explain Modern manufacturing method for acetic acid.
  - (c) Describe Ziegler process for the manufacturing of polyethylene.
- 6. Attempt any TWO of the following : 12**
- (a) Explain manufacturing of ethanol from molasses.
  - (b) Draw flow sheet for the manufacturing of polystyrene.
  - (c) Explain manufacturing process of phenol by Toluene oxidation process.
-