22410

21222

3 Hours / 70 Marks Seat No. | | | | | | | | |

15 minutes extra for each hour

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

(2) Answer each next main Question on a new page.

(3) Figures to the right indicate full marks.

(4) 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) Write names of any two raw materials used for the production of ethanol.

(b) List any two industrial applications of acetaldehyde.

(c) Write the name of catalyst used for hydrogenation process of oil.

(d) List any two industrial applications of polyester.

(e) List four types of papers.

(f) Name any two processes used for manufacturing of polyethylene.

(g) List raw materials used for the production of Phenol by Raschig process.

2. Attempt any THREE of the following : **12**

(a) Write two applications of industrial paints. Draw block diagram for manufacturing of paint.

(b) Draw PFD for manufacturing of polyethylene.

(c) Write reactions involved in manufacturing of Phenol by Cumene process. Name raw materials used in process.

(d) Explain hydrogenation of oil with flow diagram.

3. Attempt any THREE of the following : **12**

(a) Explain manufacturing of Butanol by Oxo process.

(b) Explain cleansing action of soap by neat sketch.

(c) Differentiate between Varnish and Lacquers (any four points).

(d) Explain manufacturing of paper from pulp with moisture range in different drying rolls.

4. Attempt any THREE of the following : **12**

(a) Explain manufacturing of Soap with neat PFD.

(b) List any four constituents of paint with their function.

(c) Write reaction involved in manufacturing of Polyester.

(d) Draw PFD for manufacturing of Phenol by toluene.

(e) Explain manufacturing process of phenol by Raschig process.

5. Attempt any TWO of the following : **12**

(a) Describe manufacturing of Pulp by Kraft process with neat flow diagram.

(b) Explain manufacturing of Acetaldehyde with neat flow diagram.

(c) Define condensation & addition polymerisation with example. Write reaction involved in manufacturing of PVC.

6. Attempt any TWO of the following : **12**

(a) Explain manufacturing of ethyl alcohol using corn. Draw neat PFD.

(b) Explain manufacturing of Polyethylene by Ziegler process with neat PFD.

(c) Draw PFD for manufacturing of Phenol by Cumene. Write reactions involved in the process.
