

22410

24225

3 Hours / 70 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.
 - (4) Assume suitable data, if necessary.
 - (5) 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) Name the enzymes used in the manufacturing of alcohol by molasses.
- (b) List any four industrial applications of alcohol.
- (c) Define saponification number of an oil.
- (d) Write any four uses of Poly Vinyl Chloride (PVC).
- (e) List any two processes for manufacturing of pulp.
- (f) List any four applications of Polyester.
- (g) Write the names of two process used for manufacturing of phenol.

2. Attempt any THREE of the following :

12

- (a) Draw process block diagram for manufacturing of paint.
- (b) Distinguish between low density polyethylene and high density polyethylene with respect to process conditions and industrial applications.
- (c) Write reaction to convert cumene into phenol.
- (d) Draw a neat flow diagram of manufacturing of soap from oil by continuous process.



- 3. Attempt any THREE of the following : 12**
- (a) Draw process flow diagram for manufacturing of alcohol by molasses.
 - (b) Write comparison of soaps and detergents.
 - (c) List the constituents of paints. Explain their functions.
 - (d) Explain recovery of black liquor from sulphite process of pulp manufacturing.
- 4. Attempt any THREE of the following : 12**
- (a) Detergents are more superior than soap. Give reason.
 - (b) Differentiate between paint and varnish.
 - (c) Define GSM. State various types of papers with uses (any six).
 - (d) Describe the process for manufacturing of phenol by Rasching process.
 - (e) Write raw materials and chemical reaction involved in manufacturing of phenol by toluene.
- 5. Attempt any TWO of the following : 12**
- (a) Explain manufacturing of pulp by sulphate process with neat flow diagram.
 - (b) Explain manufacturing of alcohol by corn with neat labelled flow sheet.
 - (c) Write various steps involved with flow diagram in manufacturing of paper from pulp with respect to moisture content.
- 6. Attempt any TWO of the following : 12**
- (a) Describe manufacturing of Butanol with process flow diagram.
 - (b) Explain manufacturing of polyester by using DMT with neat labelled process flow diagram.
 - (c) Explain manufacturing process of phenol by cumene peroxidation with neat flow diagram.
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