

22410

22232

3 Hours / 70 Marks

Seat No.

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- 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) State any four uses of ethyl acetate.
- (b) Write the reaction involved in manufacturing of acetaldehyde.
- (c) List the raw materials used for manufacturing of soap.
- (d) Define saponification value of oil.
- (e) Write the names of any two processes for manufacturing of pulp.
- (f) Write the names of raw materials in manufacturing of polyester.
- (g) Write chemical reaction for preparation of phenol by cumene.

2. Attempt any THREE of the following :

12

- (a) Describe the role of constituents in lacquer.
- (b) Draw process flow diagram for manufacturing of polyester.
- (c) Explain manufacturing of Phenol by Raschig process.
- (d) Describe hydrogenation process of oil.



- 3. Attempt any THREE of the following : 12**
- (a) State the raw materials, chemical reaction & PFD of alcohol by molasses.
 - (b) Draw flowsheet for manufacturing of soap by continuous method.
 - (c) Describe the types of lacquers & their uses.
 - (d) Compare sulphate & sulphite process of manufacturing of pulp.
- 4. Attempt any THREE of the following : 12**
- (a) Differentiate between detergent & soap.
 - (b) Describe the process of manufacturing of paint.
 - (c) Write reactions involved in manufacturing of Polyethylene & write any two industrial applications of it.
 - (d) Write physical properties & industrial applications of Phenol (any **four**).
 - (e) Describe preparation of Phenol from cumene process.
- 5. Attempt any TWO of the following : 12**
- (a) List the different operation zones in paper manufacturing. Write percent of moisture content in each zone.
 - (b) Describe the production of alcohol by corn with neat flow diagram.
 - (c) Describe the mechanism of polymerisation & explain addition & condensation polymerisation.
- 6. Attempt any TWO of the following : 12**
- (a) Draw neat flowsheet for manufacturing process of butanol & also state any four industrial applications of butanol.
 - (b) Describe manufacturing of polyvinyl chloride with neat flow diagram.
 - (c) Explain manufacturing process of Phenol by toluene process with reactions involve in it.
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