

313337

12526

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 answer 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) Enlist raw materials used for manufacturing of hydrochloric acid.
  - b) Give any two properties of urea.
  - c) Define acid value of oil.
  - d) Give any two uses of polyethylene.
  - e) List any two properties of alcohol.
  - f) Define bio-fertilizer.
  - g) Name the industrial application of soda ash. (Any two points)

P.T.O.

- 2. Attempt any THREE of the following: 12**
- Draw process flow diagram of manufacturing of sulphuric acid by contact process.
  - Describe importance and application of biofertilizers.
  - Give the mechanism of polymerisation.
  - Draw flowsheet for manufacturing of phenol by cumene process.
- 3. Attempt any THREE of the following: 12**
- Explain manufacturing of ethyl alcohol by fermentation method.
  - Give the uses of PVC and polyester. (Any four points)
  - Draw the flowsheet of manufacturing of mixed fertilizer.
  - Differentiate between alcohol and phenol. (Any four points)
- 4. Attempt any THREE of the following: 12**
- Describe hydrogenation process of oil.
  - Write the reaction in manufacturing of polyester and describe process in detail.
  - Explain manufacturing of alcohol from molasses.
  - Describe manufacturing process of polyvinyl chloride.
  - Explain the synthesis process of hydrochloric acid.
- 5. Attempt any TWO of the following: 12**
- Distinguish between single and triple superphosphate with respect to raw material and uses.
  - Explain the classification of fertilizers in detail.
  - Describe manufacturing of soap by continuous process with chemical reaction and flow diagram.
- 6. Attempt any TWO of the following: 12**
- Explain in detail manufacturing of ethyl acetate.
  - Distinguish between soap and detergent. (Any six points)
  - Describe manufacturing process of caustic soda with process flow diagram.
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