

# 17427

**15116**

**3 Hours / 100 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1. a) Attempt any SIX of the following: 12
- (i) Define:
    - 1) absolute alcohol
    - 2) denatured alcohol
  - (ii) Differentiate between paint and varnish (any two points).
  - (iii) Give any two uses of viscous rayon.
  - (iv) Give any two limitations of soap action.
  - (v) Write only the reactions for manufacturing of phenol from toluene.
  - (vi) Name any two white and red pigments each.
  - (vii) Write any two uses of polystyrene.
  - (viii) Give any two uses of ethyl acetate.

P.T.O.

- b) **Attempt any TWO of the following:** **8**
- (i) Describe manufacturing of phenol from chlorobenzene - caustic hydrolysis.
  - (ii) Explain hydrogenation of oil by dry process.
  - (iii) Give comparison between sulphate and sulphite process (any four points).
2. **Attempt any FOUR of the following:** **16**
- a) Describe manufacturing process of acetic acid from acetaldehyde.
  - b) Define:
    - (i) saponification value
    - (ii) acid value of oilalso give two uses of each.
  - c) Draw the flow sheet of manufacturing of phenol from cumene.
  - d) Write two physical properties each of ethyl acetate and butanol.
  - e) Describe manufacturing process of PVC by emulsion polymerisation.
  - f) Explain manufacturing of detergents from sulphated fatty alcohols.
3. **Attempt any FOUR of the following:** **16**
- a) Draw the flow sheet of production of viscous rayon.
  - b) Write any four uses of ethyl alcohol.
  - c) Explain cleansing action of soap.
  - d) Describe manufacturing process of polyester from DMT.
  - e) Describe manufacturing process of butanol from propylene.
  - f) Give any four industrial uses of phenol.

- 4. Attempt any FOUR of the following:** **16**
- a) Explain manufacturing of ethyl alcohol from corn.
  - b) Name any four constituents of lacquers. Also give their functions.
  - c) Give comparison between soap and detergent (any four points).
  - d) Explain addition and condensation polymerisation with suitable example.
  - e) Give comparison between low pressure and high pressure process for manufacturing of polyethylene (any four points).
  - f) Define the following terms, used to describe failure of paint:
    - (i) chalking
    - (ii) flaking
    - (iii) alligatoring
    - (iv) checking
- 5. Attempt any TWO of the following:** **16**
- a) With flow sheet, explain the manufacturing process of polystyrene from benzene.
  - b) Explain continuous hydrolysis and saponification process of manufacturing of soap, with flow sheet.
  - c) Explain manufacturing of phenol by Rasching process with flow sheet.
- 6. Attempt any TWO of the following:** **16**
- a) Explain manufacturing of paint, with flow sheet.
  - b) Explain sulphite process for manufacturing of pulp, with flow sheet.
  - c) Explain Ziegler process for manufacturing of polyethylene, with flow sheet.
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