



# 17427

21718

**3 Hours / 100 Marks**

Seat No.

--	--	--	--	--	--	--	--

- 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) *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**
- a) Differentiate between addition polymerisation and condensation polymerisation (any two points).
  - b) Write any four uses of paper.
  - c) Name raw materials for manufacture of paper.
  - d) Write any four industrial application of phenol.
  - e) Define saponification and iodine value of oil.
  - f) Write chemical reaction for production of rayon.
  - g) Differentiate between point and varnish.
- B) Attempt **any two** of the following : **8**
- a) Explain the function of any four constituents of paint.
  - b) Explain the production of acetic acid from acetaldehyde.
  - c) Draw process flow sheet for manufacturing of DMT.
2. Attempt **any four** of the following : **16**
- a) Draw well labelled flow diagram for manufacture of polyethylene by ziegler process.
  - b) Describe the process of hydrogenation of oil.
  - c) Discuss the properties of phenol.
  - d) Define Lacquers. Write its constituents and explain their functions.
  - e) Explain classification of detergents with examples.
  - f) Explain the manufacture of butanol by oxo process.

**P.T.O.**



3. Attempt **any four** of the following :

- a) Describe manufacture of paper from pulp.
- b) Describe manufacture of phenol by toluene oxidation process.
- c) Explain manufacture of paint with block diagram.
- d) Write one use of the following :
  - i) Polyethylene
  - ii) Polystyrene
  - iii) Polyvinyl chloride
  - iv) Polyester.
- e) Draw labelled flow diagram for manufacture of pulp by sulphate process.
- f) Write four industrial application of butanol.

4. Attempt **any four** of the following :

16

- a) Explain cleansing action of soap.
- b) Explain manufacture process of phenol by Raschig Process.
- c) Compare sulphate process and sulphite process of manufacturing pulp.
- d) Write a chemical reaction for manufacture of acetic acid and ethyl alcohol.
- e) Define varnish. Give any three uses of varnish.
- f) Describe manufacture of vinyl chloride with labelled flow sheet.

5. Attempt **any two** of the following :

16

- a) Describe manufacture of phenol by cumene peroxidation process with process flow diagram.
- b) Explain manufacture of soap by continuous process with labelled flow diagram.
- c) Describe manufacture of polystyrene with respect to feed materials, reaction, condition and catalyst used.

6. Attempt **any two** of the following :

16

- a) Explain the refining process of edible oil with labelled flow diagram.
  - b) Describe manufacture of ethanol from molasses and explain the various factors affecting production.
  - c) i) Draw labelled flow diagram of manufacture of polyester.  
ii) Write the chemical reaction for the manufacture of polyester.
-