

17427

15162

3 Hours / 100 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) Figure to the right indicate full marks.

Marks

1. (A) Attempt any SIX :

12

- (a) State different methods for production of pulp.
- (b) Give two examples, each of edible and non-edible oil.
- (c) State the names of enzymes used in manufacturing of alcohol from molasses.
- (d) What is Vinegar ?
- (e) Define saponification value of oil.
- (f) State importance of Acid value of oil.
- (g) What is 'GSM' in case of paper ?

(B) Attempt any TWO :

8

- (a) Explain the types of polymerization with examples.
- (b) Give constituents of paint.
- (c) Draw neat sketch for hydrogenation of oil.

2. Attempt any FOUR :

16

- (a) Describe manufacturing of acetic acid from acetaldehyde.
- (b) Explain classification of paint.
- (c) Draw a flowsheet for manufacturing of paper from pulp.
- (d) List the processes for manufacturing of phenol.
- (e) Explain with the help of reactions only, manufacturing of polyethylene.
- (f) Give the uses of byproducts obtained in manufacturing of oil.

- 3. Attempt any FOUR :** **16**
- (a) Describe manufacturing of butanol.
 - (b) What are Laquers ? Give two industrial applications.
 - (c) List various types of papers.
 - (d) State raw materials used in manufacturing of phenol by Toluene oxidation process and cumene peroxidation process.
 - (e) Describe manufacturing of PVC.
 - (f) Draw a flowsheet for manufacturing of polyester.
- 4. Attempt any FOUR :** **16**
- (a) Give the reactions involved in manufacturing of polystyrene.
 - (b) State the types of varnishes and give its uses.
 - (c) Give the reactions involved in manufacturing of alcohol from molasses.
 - (d) Explain the cleansing action of soap.
 - (e) Differentiate between soaps and detergents (any four points).
 - (f) Draw the flowsheet for manufacturing of polyethylene by Ziegler process.
- 5. Attempt any TWO :** **16**
- (a) Explain with the help of flowsheet manufacturing of ethanol.
 - (b) Describe extraction of oil from seeds.
 - (c) With a neat flowsheet explain manufacturing of phenol by cumene peroxidation process.
- 6. Attempt any TWO :** **16**
- (a) Describe manufacturing of pulp by sulphate (kraft) process with flow diagram.
 - (b) Describe in detail manufacturing of polystyrene with flowsheet.
 - (c) With a flowsheet explain manufacturing of phenol by Toluene oxidation process.
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