17427

21314

3 Hours / 100 Marks Seat No. | | | | | | | | |

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 <u>SIX</u> of the following:** **12**

i) List the raw materials for the manufacturing of pulp.

ii) Define acid value of oil.

iii) Explain the term denatured alcohol.

iv) List enzymes used in manufacture of ethanol by Molassess process.

v) Name two solvents which can be used for extraction of oil from seeds.

vi) State the significance of iodine value of oil.

vii) State two uses of rayon.

b) **Attempt any <u>TWO</u> of the following:** **8**

a) Solution polymerization is always avoided. Give reason.

b) Write the raw materials of paints with application.

c) Explain saponification with suitable example.

Marks

2. Attempt any FOUR of the following: **16**

a) Describe the manufacturing process of acetic acid.

b) Describe the manufacturing of paint.

c) Draw a flow sheet for the manufacturing of pulp.

d) Describe the manufacturing of phenol by Rasching process.

e) Draw Ziegler process for manufacturing of polyethylene.

f) Differentiate between soap and detergent (any four points).

3. Attempt any FOUR of the following: **16**

a) Describe the manufacturing of butanol.

b) Distinguish between paint and varnishes.

c) Why lignin is extracted from pulp?

d) Name various methods for phenol manufacturing.

e) Describe manufacturing process of PVC.

f) Differentiate between thermosetting and thermoplastic polymers.

4. Attempt any FOUR of the following: **16**

a) Describe the manufacturing of polystyrene.

b) What are pigments? Give two applications.

c) Explain the term industrial spirit.

d) Describe the term hydrogenation of oil.

e) Describe the manufacturing of detergents by sulfated fatty alcohols.

f) State the uses of polyesters (any four).

Marks

5. Attempt any TWO of the following: **16**

a) Describe the manufacturing of ethanol from molasses with neat flow diagram.

b) Describe the extraction of oil with neat flow diagram.

c) Give the manufacturing of phenol by cumene process.

6. Attempt any TWO of the following: **16**

a) Give the manufacturing of paper with neat flow diagram.

b) How polyester is manufactured? Describe with neat flow diagram.

c) Describe the manufacturing of phenol by toluene oxidation process.

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