



C20-CHPC-404

7478

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DCHPC – FOURTH SEMESTER EXAMINATION

PETROCHEMICAL TECHNOLOGY—I

Time : 3 Hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List the petrochemicals feedstocks in India.
2. Write the petrochemicals obtained from methane.
3. Mention the derivatives obtained from synthesis gas.
4. List the uses of ethylene oxide.
5. What are the applications of isopropyl alcohol?
6. Write the petrochemicals obtained from butadiene.
7. Mention the sources of BTX aromatics.
8. Write the petrochemicals obtained from benzene, toluene and xylene.
9. Define the terms polymer and polymerization process.
10. List the types of synthetic rubber.

PART—B

8×5=40

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 11.** Explain the production of mono ethylene glycol by hydrolysis of ethylene oxide.

(OR)

Describe the production of isoprene from acetone.

- 12.** Explain the production of propylene from catalytic cracking of petroleum distillate.

(OR)

Explain the production of glycerine from propylene oxide.

- 13.** Explain the production of butadiene by dehydrogenation of butane.

(OR)

Explain the production of methacrylate by acetone cyanohydrin process.

- 14.** Explain the production of styrene by dehydrogenation of ethyl benzene.

(OR)

Explain the production of maleic acid by oxidation of benzene.

- 15.** Explain the production of high density polyethylene.

(OR)

Explain the production of polystyrene.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. To obtain dry gas, ethylene and propylene, which of the separation techniques of gases do you use? Illustrate the separation technique with a neat sketch.

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