



C20-CHPP-404

7473

BOARD DIPLOMA EXAMINATION, (C-20)
OCTOBER/NOVEMBER—2023

DCHPP – FOURTH SEMESTER EXAMINATION

POLYMER PRODUCTS AND POLYMER PROCESSING

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. What are the regenerable raw materials?
2. State any three properties of polypropylene.
3. List any three properties of EVA.
4. List any three applications of Epoxy Resins.
5. State any six uses of nylon 6.
6. List any six uses of polycarbonates.
7. List any three properties of polyvinyl alcohol.
8. Draw a neat sketch of the vacuum forming mould and indicate its parts.
9. Explain the term compounding.
10. List any three properties of viscose rayon.

- 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.** What are the various polymerization techniques? Explain about suspension polymerization.

(OR)

Explain about determination of molecular weight of a polymer by number average method.

- 12.** Describe the manufacturing process of polyacrylates.

(OR)

Describe the manufacturing process of HDPE.

- 13.** Describe the manufacturing process of phenol formaldehyde resin with a neat flow diagram.

(OR)

With a neat flow diagram, explain the manufacturing process of PET.

- 14.** With a neat flow diagram, explain the manufacturing process of PAN.

(OR)

Describe the manufacture of ABS with a neat flow sheet.

- 15.** Describe the transfer moulding operation with a neat sketch.

(OR)

Draw a neat sketch of extrusion machine and explain the process mentioning its parts.

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.** What are the raw materials required for the manufacture of urea - formaldehyde resin? Write the chemical reactions involved. What are the various fields of applications of urea-formaldehyde resin?

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