

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 With four examples, explain the synthesis of polymers by condensation polymerization.
- Q.4 Explain emulsion polymerization technique and state its merits and demerits over solution polymerization.
- Q.5 Describe structure, properties and uses of polyesters and urea formaldehyde resin.
- Q.6 Define cross linking agents and with examples, explain the role of cross linking agents in the manufacture of plastics.
- Q.7 With neat and labelled sketch, explain injection molding polymer processing technique.

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Roll No.

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4th Sem. / Chem. Engg.

Subject : Polymer Technology

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1 a) Define polymer.
b) Define co-polymer.
c) Define viscosity average molecular weight.
d) With one example, define plastic.
e) Define step growth polymerization.
f) Define addition polymerization.
g) Define bulk polymerization.
h) Define solution polymerization.
i) What is Bakelite?

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- j) Write down structure of nylon 6.
- k) Write down formulae of styrene.
- l) Define resin.
- m) State the properties of polyethylene.
- n) With two examples, define additives.
- o) State the function of mica in plastics.
- p) Define calendering.
- q) State the function of colouring matter in plastics.
- r) With one example, explain 'free radical'.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

- Q.2
- i) With one example, explain weight average molecular weight of polymers.
 - ii) Explain the effect of molecular weight on the properties of polymers.
 - iii) Write a note on elastomers.

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- iv) With one example, explain chain growth polymerization.
- v) With one example, explain co polymerization.
- vi) Explain the technique of suspension polymerization.
- vii) Explain properties and uses of polypropylene.
- viii) Write down structure and properties of Nylon 66.
- ix) Write structure and uses of Teflon.
- x) State properties and uses of polystyrene.
- xi) Explain the function of fillers in plastics.
- xii) Explain the role of stabilizers in plastics.
- xiii) Explain calendering processing technique for polymers.
- xiv) With neat sketch, explain blow molding technique for polymer processing.
- xv) With neat sketch, explain the technique of extrusion for polymer processing.

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