



SF-8197

B. E. II (Sem. IV) (T.P.) Examination

May / June – 2011

Manufacturing & Applications of
Polymeric Materials

(New Course)

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दृशविले निशाचीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="checkbox"/> B. E. 2 (Sem. 4) (T.P.)	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="checkbox"/> Manufa. & Appli. of Polymeric Materials (New)	<input type="text"/>
Subject Code No. : <input type="text"/> 8 <input type="text"/> 1 <input type="text"/> 9 <input type="text"/> 7	Section No. (1, 2,.....) : <input type="text"/> 1&2
Student's Signature	

- (2) Answers to the two sections must be written in same answer book.
(3) Figures to the right indicate full marks.

SECTION - I

- 1 (a) Answer the following objective questions. 10
- (i) Precondensates are monomers - True or false.
 - (ii) Polyacrylates are used in baby diapers, true or false.
 - (iii) Give the full form of SAP.
 - (iv) Expand DMU to its full form.
 - (v) Give one specific application of DMDHEU.
 - (vi) Expand DMPS to its full form.
 - (vii) What is the use of Polyethylene emulsions in textile finishing ?
 - (viii) Condensation reaction between glyoxal and urea gives _____.
 - (ix) Polyvinyl alcohol is made by polymerization of vinyl alcohol, true or false.
 - (x) Methylation of ethylene urea gives _____.
- (b) Describe the method for preparation of polyvinyl alcohol; with its chemistry and properties. 10
- 2 (a) Describe the production of U.F. precondensate. 10
- (b) Explain the techno chemical aspects of PE softeners. 5

OR

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[Contd...

- 2 Describe the process for preparation of acrylate emulsions by emulsion polymerization with its mechanism. 15
- 3 Write short notes on any three of the following : 15
- Describe the general chemistry of silicones
 - Drawbacks of U.F. resin
 - Polyethoxylates
 - Photo emulsions

SECTION - II

- 4 (a) Answer the following objective questions : 10
- Name the two emulsifiers used in Emulsion polymerization of acrylates.
 - UF resin releases more free formaldehyde than DMDHEU-TRUE or FALSE.
 - Give the two textile applications of PVC.
 - What is the use of PVA in textile printing ?
 - Name one application of polyacrylates in textile printing.
 - Name two polymers widely used in warp sizing.
 - Silicones useful for textile applications are generally in the form of _____
 - Soil release finishes are based on _____ polymers.
 - Which type of synthetic sizes can be easily removed during desizing ?
 - Which technique is the most used one for the manufacturing of PVC ?
- (b) Discuss about the SAP, its preparation and applications. 10
- 5 (a) Describe elaborately the gelling and non-gelling type water repellants. 10
- (b) Discuss about the use of acrylates in sizing. 5

OR

- 5 Describe the process for manufacturing of PVC giving a flow sheet diagram and properties. 15
- 6 Write short notes on any **three** of the following : 15
- Silicone Fluids
 - Pigment binders
 - Synthetic polymer thickener
 - Polyethylene glycols.