Enrolment No.____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER - II • EXAMINATION - SUMMER • 2014 Subject code: 1721605

Date: 20-06-2014

Subject Name: Polymer Processing

Time: 02:30 pm - 05:00 pm **Total Marks: 70**

Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full mark.

| | 5. | rigures to the right mulcate fun mark. | |
|-----|------------|--|------|
| Q.1 | (a) | How would you select a blender for carrying out mixing & compounding a particular Polymer? Write in detail. | (04) |
| | (b) | Describe the working of an Intensive dry mixer. | (04) |
| | (c) | Explain the working of Continuous Kneader with the help of sketch. | (06) |
| Q.2 | (a) | What is Thermoforming? List the important aspects of thermoforming process. Write about any two in detail. | (07) |
| | (b) | Answer the following. | |
| | (i) | Write the classification of Polymer processing methods. | (03) |
| | (ii) | List the factors on which process selection depends. OR | (04) |
| | (b) | List the different techniques for Thermoforming. Write advantages & disadvantages of thermoforming. | (07) |
| Q.3 | (a) | Write about the application & advantages of Calendering process. | (07) |
| | (b) | Discuss the processing parameters of Calender Machine. OR | (07) |
| Q.3 | | Discuss in detail about Calendering process with plant details. | (14) |
| Q.4 | | Enlist the various types of molding methods and describe any four in brief. OR | (14) |
| Q.4 | | Enlist & Explain any five common problems with molding blanks that can lead to inferior quality of moldings. | (14) |
| Q.5 | (a) | Write in detail about the fundamentals of Extrusion. | (07) |
| | (b) | Discuss about the Ram Extruders & List the advantages & disadvantages of Ram Extruders. | (07) |
| OR | | | |
| Q.5 | (a) | Discuss in detail about the factors affecting extruder soutput. | (07) |
| | (b) | How many zones are available in single screw extruder? Write about any one in detail. | (07) |
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