

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – IV • EXAMINATION – WINTER 2012****Subject code: 142603****Date: 29/12/2012****Subject Name: Rubber Engineering****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a) Answer the following
- (i) Write a short note on the types of calendar. **05**
- (ii) Define the following terms: (i) Skimming (ii) Frictioning **02**
- Q.1 (b) Discuss in detail about the construction and working of mixing mill. **07**
- Q.2 (a) Answer the following
- (i) Write down the main sources of potential danger and typical causes of accidents and method of guarding for mixing mill. **04**
- (ii) Differentiate the single geared mixing mill and double geared mixing mill. **03**
- Q.2 (b) Discuss the advantages and disadvantages of internal mixer. **07**
- OR**
- Q.2 (b) Answer the following
- (i) List the major components of internal mixer. **03**
- (ii) Write in brief about the tandem mixing. **04**
- Q.3 (a) Answer the following
- (i) Differentiate the cold feed extruder and hot feed extruder. **05**
- (ii) How is flash removed by trimming? **02**
- Q.3 (b) Discuss in detail about the general classification of mould. **07**
- OR**
- Q.3 (a) Answer the following
- (i) Write a short note on vacuum extruder. **06**
- (ii) How is flash removed by punching? **02**
- Q.3 (b) Explain the various methods of mould cleaning. **06**
- Q.4 (a) Compare the transfer moulding process with injection moulding process. **07**
- Q.4 (b) Answer the following
- (i) Write in brief about the clamping unit of injection moulding machine. **04**
- (ii) Draw labeled diagram of transfer mould. **03**
- OR**
- Q.4 (a) Discuss in detail about the various types of injection units used in injection moulding machine. **07**
- Q.4 (b) Answer the following
- (i) Explain the compression moulding process. Give the examples of rubber products which are prepared by compression moulding process. **04**
- (ii) Write a brief note on positive type compression mould. **03**
- Q.5 (a) Write a short note on Bag-O-Matic press. **05**
- Q.5 (b) Answer the following
- (i) Describe the reasons and remedies for backrinding. **04**
- (ii) Write a short note on turbo stirrer. **05**
- OR**
- Q.5 (a) Explain the rotating table type press and tilting head type press respectively. **05**
- Q.5 (b) Answer the following
- (i) Describe the reasons and remedies for air traps. **04**
- (ii) Write a short note on planetary mixer. **05**
