

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Remedial Examination Nov/ Dec. 2010****Subject code: 142603****Subject Name: Rubber Engineering****Date: 06 /12 /2010****Time: 03.00 pm – 05.30 pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) Answer the following
- (i) Draw various configurations of three roll calender. **02**
 - (ii) Define the following terms (i) Embossing (ii) Profiling **02**
 - (iii) List the reasons for roll deflection. **02**
- (b) Answer the following
- (i) What do you mean by cambering? Explain the cambering of three roll calender with figure. **04**
 - (ii) Explain the main sources of potential danger, typical causes of accident and method of guarding for press and internal mixer respectively. **04**
- Q.2** (a) Answer the following
- (i) Write a short note on mixing mill with its advantages and disadvantages. **08**
- (b) List out the operating variables for internal mixer. Discuss any three in detail. **06**
- OR**
- (b) Answer the following
- (i) Write down the limitations of Transfer Mix. **03**
 - (ii) Give the full form of FCM. What are the applications of FCM? **03**
- Q.3** (a) Answer the following
- (i) Write a short note on Vacuum Extruder. **06**
 - (ii) Give the difference between screw extruder with ram extruder. **04**
- (b) How the flash removal is carried out by machine trimming and buffing respectively? **04**
- OR**
- Q.3** (a) Answer the following
- (i) Discuss the key features of cold feed extruder. **06**
 - (ii) Define the term extrusion. Which products can be prepared by extrusion? **02**
 - (iii) Write down the function of screw. **02**
- (b) How the flash removal is carried out by grinding? **04**
- Q.4** (a) Answer the following
- (i) Discuss in detail about the classification of mould. **06**
 - (ii) Write a short note on pot type transfer moulding. **04**
- (b) Explain the working of reciprocating type injection unit. **04**
- OR**
- Q.4** (a) Answer the following
- (i) Explain the various methods of mould cleaning. **06**
 - (ii) Define the following terms: (i) Transfer Pot (ii) Sprue (iii) Runner (iv) Gate **04**
- (b) Give the advantages of injection moulding process. **04**

- Q.5** (a) Discuss in details about the major components of press with their functions. **08**
(b) Discuss the following moulding problems with their causes and remedies: (i) **06**
Pebbling (ii) Over cure

OR

- Q.5** (a) Answer the following
(i) Write a short note on Bag-O-Matic press. **06**
(ii) State the Hydraulic principle. **02**
(b) Discuss the following moulding problems with their causes and remedies: (i) **06**
Flow cracks(ii) Under cure
