

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM-IV Examination-Nov/Dec-2011

Subject code: 142603

Date: 30/11/2011

Subject Name: Rubber Engineering

Time: 02.30 pm -5.00 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)** What do you mean by frictioning? Discuss frictioning operation with respect to calendar. **07**
- Q. 1 (b)** Answer the following
- i** Mention the properties and formulation of compound required to carry out the skim-coating. **03**
- ii** Explain the main sources of potential danger, typical causes of accident and method of guarding for internal mixer and multiday light press respectively. **04**
- Q. 2 (a)** Describe the various components of Mixing Mill with their functions. **07**
- Q. 2 (b)** Answer the following
- i** Write down the advantages and disadvantages of continuous mixing process. **04**
- ii** Explain the working principle of Tandem Mixing. **03**
- OR**
- Q. 2 (b)** Answer the following
- i** Write down the characteristics of under masticated rubber. **03**
- ii** Which different types of discharge door are used in Internal Mixer? Which one is preferable? Why? **04**
- Q. 3 (a)** Write a short note on Vacuum Extruder. **06**
- Q. 3 (b)** Answer the following
- i** Define the following terms: (1) Lead (2) Pitch (3) L/D Ratio (4) Compression Ratio **04**
- ii** How flash of vulcanizate is removed by grinding? **04**
- OR**
- Q. 3 (a)** Answer the following
- i** Give the difference between Cold Feed Extruder and Hot Feed Extruder. **05**
- Q. 3 (b)** Answer the following
- i** Explain the following terms with respect to Extruder: (1) Hopper (2) Screw **06**
- ii** What do you mean by buffing? How is it carried out? **03**

Q. 4	(a)	Answer the following	
	i	Write a short note on Bag-O-Matic Press.	05
	ii	Write a note on hand type mould.	03
Q. 4	(b)	Explain the causes and remedies for following moulding problems: (1) Over Cure (2) Under Cure	06
		OR	
Q. 4	(a)	Discuss the following features with respect to Hydraulic Press: (1) Main frame Assembly (2) Battery Operations	06
Q. 4	(b)	Answer the following	
	i	Write a short note on mould releasing agent.	04
	ii	Write a short note on Turbo Stirrer.	04
Q. 5	(a)	List the different types of injection units used in Injection Moulding machine. Discuss any two.	07
Q. 5	(b)	Answer the following	
	i	Write down the advantages and disadvantages of Compression Moulding process.	04
	ii	Explain the term Transfer Moulding. List the products prepared by Transfer Moulding process.	03
		OR	
Q. 5	(a)	Discuss in detail about the Injection Moulding methods.	07
Q. 5	(b)	Answer the following	
	i	Write a short note on semi-positive type Compression Mould.	03
	ii	Explain the plunger type Transfer Moulding.	04
