Seat No.: \_\_\_\_\_ Enrolment No.\_\_\_\_

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-IV • EXAMINATION - WINTER • 2014** 

Subject Code: 142603 Date: 31-12-2014			
Subje	ect Na	ame: Rubber Engineering	
Time	: 02:3	30 pm - 05:00 pm Total Marks: 70	
Instru	ctions:		
	2. N	ttempt all questions. Iake suitable assumptions wherever necessary. igures to the right indicate full marks.	
Q.1	(a)	How temperature is controlled during calendering? List out the compound related causes which affect accuracy in calendering.	07
Q.1	(b) i	Answer the following Give typical causes of accident and method of guarding for calender and multi daylight press respectively.	05
	ii	Write down the functions of calender.	02
Q.2	(a)	Discuss in detail about the problems associated with extrusion process.	07
Q.2	(b) i	Answer the following Which modifications are done in cold feed extruder to overcome the problems encountered with it?	04
	ii	How flash of vulcanizate is removed by buffing?  OR	03
<b>Q.2</b>	<b>(b)</b>	Answer the following	
	i	Differentiate screw extruder and ram extruder.	05
	ii	How flash of vulcanizate is removed by punching?	02
Q.3	(a)	Discuss the major components of mixing mill with their functions.	07
Q.3	<b>(b)</b>	Answer the following	
	i	Explain various drive systems used in an internal mixer.	04
	ii	Write down full form of FCM. Also give its applications.	03
		OR	
Q.3	(a)	Discuss in detail about the various stages associated with mixing process.	07
Q.3	<b>(b)</b>	Answer the following	
	i	List the various process variables which affect performance of an internal mixer.	05
	ii	Write on any two.  Define the given terms: (i) Nerve (ii) Bank	02
		Define the given terms (i) tverve (ii) Daim	<b>-</b>
Q.4	(a)	Write a short note on types of transfer moulding.	07
Q.4	<b>(b)</b>	Answer the following	
	i	What do you mean by air marking? Write sown the typical causes for it. What is its remedy?	04
	ii	Define the given terms:(i)Mould (ii) Flash (iii) Cavity <b>OR</b>	03
0.4	(a)	Discuss general classification of the moulds according to their operations.	07

Q.4	<b>(b)</b>	Answer the following	
	i	What do you mean by backrinding? Write down typical causes for it. What is its remedy?	04
	ii	Define the given terms:(i)Sprue (ii) Runner (iii) Gate	03
Q.5	(a)	Discuss the classification of hydraulic press.	07
Q.5	<b>(b)</b>	Answer the following	
_	i	Write in brief about major units of injection moulding machine.	04
	ii	Write down the limitations of injection transfer moulding.	03
		OR	
Q.5	(a)	Discuss the limitations of hydraulic press.	07
Q.5	<b>(b)</b>	Explain advantages and disadvantages of injection moulding  ***********************************	07