

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-IV • EXAMINATION – SUMMER • 2014**

**Subject Code: 142603****Date: 23-06-2014****Subject Name: Rubber Engineering****Time: 10:30 am - 01:00 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)** Discuss in detail about the cambering of calendar bowl with suitable example of three roll calendar. **07**
- Q. 1 (b)** Answer the following
- i** Write down the typical causes of accident and method of guarding for mixing mill and internal mixer respectively. **05**
- ii** Draw any two roll configuration of four roll calendar. **02**
- Q. 2 (a)** Explain the function and associated features of given components of extruder: (i) Screw (ii) Barrel **07**
- Q. 2 (b)** Answer the following
- i** Write a short note on cold feed extruder. **05**
- ii** How flash and spew removal is carried out by hand trimming? **02**
- OR**
- Q. 2 (b)** Answer the following
- i** Write a short note on hot feed extruder. **05**
- ii** How flash and spew removal is carried out by machine trimming? **02**
- Q. 3 (a)** Discuss in detail about the problems associated with mixing process. **07**
- Q. 3 (b)** Answer the following
- i** Explain the construction and working of Farrel Continuous Mixer (FCM). **04**
- ii** Write down the advantages of drop door. **03**
- OR**
- Q. 3 (a)** Explain the process of open mill mixing. **05**
- Q. 3 (b)** Answer the following
- i** Compare the mixing behavior of tangential rotor mixer and intermeshing rotor mixer. **05**
- ii** Explain the types of two roll mill. **04**
- Q. 4 (a)** Write down the advantages and disadvantages of transfer moulding. **05**
- Q. 4 (b)** Answer the following
- i** Write a note on prototype mould and hand mould respectively. **05**
- ii** What do you mean by distortion? Write down the typical causes for it. What is its remedy? **04**

**OR**

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Q. 4	(a)	Discuss the types of transfer moulding with necessary diagrams.	07
Q. 4	(b)	Answer the following	
	i	Write a note on semi positive mould and positive mould respectively.	05
	ii	Write down the typical causes and remedy for tearing of vulcanizate on removal from mould cavity.	02
Q. 5	(a)	Answer the following	
	i	Explain the stages associated with injection moulding process.	04
	ii	List out the products which can be prepared by compression moulding.	03
Q. 5	(b)	Discuss the unique features of hydraulic press.	07
<b>OR</b>			
Q. 5	(a)	Answer the following	
	i	Which points are to be considered during the choice of injection moulding machine?	04
	ii	Explain in brief about compression moulding process.	03
Q. 5	(b)	Discuss in detail about the major components of press.	07

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