

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2024****Subject Code:3142603****Date:20-07-2024****Subject Name: Rubber Engineering & its Economics****Time:10:30 AM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) What is the function of nip in two roll mill? Explain in detail.	<b>03</b>
	(b) Explain the various stages associated with mixing process.	<b>04</b>
	(c) Write about the construction and working of Internal Mixer.	<b>07</b>
<b>Q.2</b>	(a) List the various methods of mould cleaning.	<b>03</b>
	(b) Write down the advantages and disadvantages of compression moulding process.	<b>04</b>
	(c) Discuss the following moulding problems with their causes and remedies: (i) Backrinding (ii) Bloom.	<b>07</b>
<b>OR</b>		
	(c) Explain the rotating table type press and tilting head type press respectively.	<b>07</b>
<b>Q.3</b>	(a) Define the given terms: (i) Extrusion (ii) Dead Spot (iii) Extruder Chocking.	<b>03</b>
	(b) Differentiate Cold Feed Extruder and Hot Feed Extruder.	<b>04</b>
	(c) Explain the injection moulding process. Which products can be prepared by injection moulding process?	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Define the given terms: (i) Lead (ii)Pitch (iii) Flight	<b>03</b>
	(b) Write in brief about extruder as strainer and 'plasticator' respectively.	<b>04</b>
	(c) List the different types of injection units used in Injection Moulding machine. Discuss any two.	<b>07</b>
<b>Q.4</b>	(a) What is the most common injury caused by working with machines unsafely?	<b>03</b>
	(b) Explain the main sources of potential danger, typical causes of accident and method of guarding for mixing mill and calendar respectively.	<b>04</b>
	(c) What do you mean by frictioning? Discuss frictioning operation with respect to calendar.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) What are the basic principles of machine guarding?	<b>03</b>
	(b) Write about the device used to control the thickness of rubber sheet.	<b>04</b>
	(c) Discuss in detail about the problems associated with extrusion process.	<b>07</b>
<b>Q.5</b>	(a) Define the terms: - (1)Cost (2) Profit (3) Incentives.	<b>03</b>
	(b) Write Short note on the Major Facts about Law of Demand.	<b>04</b>
	(c) Explain the main role for Production engineer in Rubber Industry.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Define the terms: - (1) Demand (2) Supply (3) Trade Cycle.	<b>03</b>
	(b) Outline the various functions of Management in Rubber Industry.	<b>04</b>
	(c) Explain the main role for a Marketing engineer in Rubber Industry.	<b>07</b>

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