

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2024

Subject Code:3162603

Date:15-05-2024

Subject Name:Rubber Equipment Design

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.**

		MARKS
Q.1	(a) Give the principal of mixing and write the components of mixing mill.	03
	(b) Mention the five important ways to solve the issues of calendar gauge control.	04
	(c) Draw the flow chart of calendaring process of four roll calendar and explain in detail.	07
Q.2	(a) Decode the given code (i) G I E 1 – 100 – 1000 x 630 (ii) S V A 2 – 1000 + 600 – 1800 X 1600	03
	(b) Classify the different types of presses and their specifications.	04
	(c) Discuss about the operating variables affects the internal mixer operation and output.	07
	OR	
	(c) Explain in detail about the temperature and pressure control systems of internal mixing equipment.	07
Q.3	(a) Write the important properties of sprue bush.	03
	(b) Draw the different Runner system layout and explain in detail.	04
	(c) Discuss in detail about the types of hot runner systems.	07
	OR	
Q.3	(a) Write the important properties require for mold design.	03
	(b) Give the importance of runner balancing.	04
	(c) Discuss in detail about the different types of Gates.	07
Q.4	(a) List out the conventional parts of injection mold.	03
	(b) Mentions the pros and cons of cold runner system.	04
	(c) Explain in detail about the FIFO and FILO concept with respect to injection molding.	07
	OR	
Q.4	(a) Give the importance of Chrome Plating in mold design.	03
	(b) Distinguish between hot feed and cold feed extruder.	04
	(c) Explain in detail about the types of guide pillars.	07
Q.5	(a) Define the term Anisotropy and write the process of compression molding.	03
	(b) Draw the design of induction heaters and write its advantages and disadvantages.	04
	(c) Discuss in detail about the action of screw with respect to extruder.	07
	OR	
Q.5	(a) Draw the design of transfer molding and explain it in brief.	03
	(b) Give the importance of construction of extension barrel of extruder.	04
	(c) Draw the design of pin type of extruder and explain it in detail.	07
