GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–V (NEW) EXAMINATION – WINTER 2024

Subject Code:3155104   **Date:09-12-2024**

Subject Name:Post Harvest Engineering of Cereals, Pulses and Oil Seeds

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)**	Define the cleaning, grading, sorting and scalping.	**03**
	(b)	Give brief summary of separators/sorter/grader used for processing.	**04**
	(c)	Explain the color sorter with diagram for grain processing.	**07**
Q.2	**(a)**	What is communition and material handling equipment.	**03**
	(b)	Define the crushing, impact, cutting and shearing	**04**
	(c)	Explain the jaw crusher and screw conveyor.	**07**
		OR	
	(c)	Write the principle of size reduction with its equation and notation.	**07**
Q.3	**(a)**	Define the mixing, conditioning and parboiling	**03**
	(b)	Give brief summary of machinery used for milling of rice.	**04**
	(c)	Explain modern methods of parboiling.	**07**
		OR	
Q.3	**(a)**	Define the mixing index with equation and notation.	**03**
	(b)	Write about the traditional methods of parboiling.	**04**
	(c)	Explain different type of mixture used for solid, liquid foods and pastes.	**07**
Q.4	**(a)**	Define the milling, machines or equipment and unit operation.	**03**
	(b)	What is pr-conditioning? Explain Pantnagar methods.	**04**
	(c)	Explain dry milling of pulses.	**07**
		OR	
Q.4	**(a)**	Give difference between traditional and commercial methods of milling.	**03**
	(b)	Give summary of unit operation with its equipment or machinery.	**04**
	(c)	What is milling of wheat? Explain any one methods of milling for wheat.	**07**
Q.5	**(a)**	What is the difference between expression and extraction?	**03**
	(b)	Explain the hydraulic press with diagram.	**04**
	(c)	Explain the process of extrusion cooking with principle.	**07**
		OR	
Q.5	**(a)**	What are the factors affecting extrusion process?	**03**
	(b)	What is the difference between single and twin-screw extruders?	**04**
	(c)	Explain the refining process of oil	**07**

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