GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2151406	Date: 05/05/2017
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Subject Name: Technology of Grains

Time: 02:30 PM to 05:00 PM Total	al Ma	rks:	70
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Instructions:

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.

Q.1		Short Questions	14
	i)	Write the nutritional significance of pulses.	
	ii)	What do you mean by 'Supply Chain of Food Grains'?	
	iii)	Define: Head rice.	
	iv)	What is Gota?	
	v)	State the principle involved in extraction of oil by 'Mechanical Extraction Method'.	
	vi)	In disc sheller the shelling rate is maintained at%.	
	vii)	What are the limitations of Solvent extraction method?	
	viii)	Major protein present in wheat flour is	
	ix)	Wheat flours with lower separation rate is known as	
	x)	Define: Extraction rate	
	xi)	Write the approximate composition of Soybean seeds.	
	xii)	Composition of germ in corn kernel is%	
	xiii)	Enlist any two antinutritional factors present in pulses.	
	xiv)	Define: Homini feed	
Q.2	(a)	State the features of modern method of milling of pulses.	03
	(b)	Discuss the important characteristics of distribution channels of cereals in India.	04
	(c)	Explain the importance and method of wheat conditioning before milling.	07
		OR	
	(c)	Enlist and explain the different grades of wheat flour.	07
Q.3	(a)	Explain the operation of cone polisher.	03
	(b)	Describe the various unit operations involved in milling of pulses.	04
	(c)	Explain in detail the unit operations of corn starch extraction by wet milling method.	07
		OR	
Q.3	(a)	State the objectives of corn steeping before milling.	03
	(b)	Discuss the various factors affecting milling characteristics of pulses.	04
	(c)	Explain the process and mechanism involved in grading of rice.	07
Q.4	(a)	Explain the principle involved in separation of paddy from rice using tray separator.	03

	(b)	Write short notes on: i) Processing of deoiled cake ii) Dehulling of oilseeds	04
	(c)	How the oil seeds are prepared prior to oil extraction? Explain.	07
		OR	
Q.4	(a)	Explain the principle involved in separation of bran from	03
	(b)	endosperm during wheat milling Define Hydrogenation of Oil? Explain the process flow chart of hydrogenation of oil.	04
	(c)	What is crude oil? Describe the process of crude oil refining.	07
Q.5	(a)	Explain the methodology to prevent the rice grain cracking during milling.	03
	(b)	Define parboiling of paddy and explain the single boiling method of parboiling.	04
	(c)	Write short notes on:	07
		i) Factors affecting on properties of grains	
		ii) Production trends of food grains in India	
		OR	
Q.5	(a)	Write short notes on:	03
		1. Air classification of wheat flour	
	(b)	 Strength of wheat flour. Briefly describe the effective utilization of byproducts obtained 	04
	(b)	from milling of corn.	U4
	(c)	Write short notes on:	07
	(-)	i) Composition of pulses and oilseeds	
		ii) Physical properties of grains	
