Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V(New) • EXAMINATION – WINTER 2016

Subject Code:2151406 **Date:24/11/2016**

Subject Name:Technology of Grains

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.**

Q.1 **Short Questions** **14**

i) Write the advantage of pitting or scratching of pulses.
ii) Define: Porosity
iii) Define: Milling of Paddy
iv) Write the principle involved in extraction of oil by 'Solvent Extraction Method'
v) In continuous magnetic separator the free flowing of paddy causes…….. of cylinder.
vi) Write the uses of deoiled cake.
vii) State the purpose of scalper.
viii) Enlist any two examples of Hard Pulses.
ix) What is the ideal moisture content of paddy for safe storage?
x) Write the botanical name of corn.
xi) Define: Carborandum
xii) State the particle size of refined wheat flour.
xiii) State the important function of reduction roller in wheat milling.
xiv) Define: Hydrogenation of oil

Q.2 **(a)** Write short note on : **03**
i) Steeping of corn
ii) Patent flour

(b) Explain the term 'hydrothermal treatment to food grains' and state its importance during processing? **04**

(c) Write the advantages pulse milling? Explain the flow diagram for dry method and wet method of pulse milling. **07**

OR

(c) Discuss the important characteristics of CFTRI method of milling of pulses. **07**

Q.3 **(a)** Differentiate between: Protein Isolate and Protein Concentrate **03**

(b) Write the nutritional significance of cereals, pulses and oilseeds in human diet. **04**

(c) State the importance of following preparatory steps of oilseeds prior to oil extraction: **07**
i) Storage ii) Dehusking iii) Heating iv) Conditioning

OR

Q.3 **(a)** Explain the flow diagram for preparation of Protein Isolate. **03**

(b) What is the significance of determination of physical properties of food grains? Explain with suitable examples. **04**

	(c)	State the groups of impurities present in crude oil and describe the steps involved for their removal.	**07**
Q.4	**(a)**	Distinguish between the process of rice milling and wheat milling.	**03**
	(b)	Draw the morphological structure of wheat showing different parts with their importance.	**04**
	(c)	Explain the dehusking of paddy using disc sheller.	**07**
		OR	
Q.4	**(a)**	Explain the commercial utilization of corn starch.	**03**
	(b)	Explain the primary cleaning of paddy.	**04**
	(c)	Explain the process of manufacturing refined wheat flour.	**07**
Q.5	**(a)**	Discuss the advantages and limitations of various methods of oil extraction	**03**
	(b)	Explain the ideal drying process for paddy.	**04**
	(c)	Explain the process of rice whitening.	**07**
		OR	
Q.5	**(a)**	Draw a well labelled diagram of 'Hydraulic Press' for oil extraction and explain its working.	**03**
	(b)	Discuss the conditioning of wheat.	**04**
	(c)	Explain the extraction of corn starch by wet milling method.	**07**

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