Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV • EXAMINATION – SUMMER 2013

Subject Code: 141404 **Date: 14-06-2013**

Subject Name: Technology of Grains

Time: 10:30am – 01:00pm **Total Marks: 70**

Instructions:

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

Q.1 **(a)** Answer the followings: **07**

i) State the importance of 'Angle of Repose' in food grains
ii) Define: Porosity
iii) What is the purpose of pitting or scratching on surface of legumes?
iv) What are the advantages of pulse milling?
v) Enlist the different methods for polishing of pulses.
vi) Define: Terminal velocity
vii) What is 'Gota'?

(b) Enlist the paddy separators and explain any one in detail. **07**

Q.2 **(a)** Describe the steps involved in crude oil refining. **07**

(b) Enlist and explain briefly the various unit operations involved manufacturing of refined wheat flour. **07**

OR

(b) Enlist various types of dryers used to dry the paddy and explain the principle involved in grain cracking during milling. **07**

Q.3 **(a)** Discuss the supply chain of food grains. **07**

(b) Write short notes on: **07**

i) Dehusking of oil seeds
ii) Grinding of oil seeds

OR

Q.3 **(a)** Write short notes on: **07**

i) Wheat grain structure
ii) Thermal properties of grain

(b) Explain in detail the solvent extraction method for oil extraction. **07**

Q.4 **(a)** Discuss the various factors affecting milling characteristics of pulses. **07**

(b) Explain the different cleaning operations carried out in rice milling. **07**

OR

Q.4 **(a)** Explain the modern method of milling of pulses. **07**

(b) Write short notes on : **07**

i) Return paddy
ii) Cone polisher

Q.5 **(a)** Discuss the various methods of corn milling for the extraction of starch. **07**

(b) Explain the functioning of beall degermer. **07**

OR

Q.5 **(a)** Briefly explain the post milling operations carried out to improve the quality of wheat flour. **07**

(b) Explain in detail about the CFTRI method of parboiling. **07**

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