

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 in 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**
