

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV • EXAMINATION – WINTER • 2014****Subject Code: 141404****Date: 31-12-2014****Subject Name: Technology of Grains****Time: 02:30 pm - 05:00 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** (a) Explain the characteristics of whole wheat flour and its utilization. **07**
(b) Explain the supply chain for wheat in India. **07**
- Q.2** (a) Explain the CFTRI method of parboiling and its advantages over conventional method of parboiling. **07**
(b) Describe the home scale and village scale method for pulse milling. **07**
- OR**
- (b) Discuss the factors affecting milling characteristics of pulses. **07**
- Q.3** (a) Draw the morphological structure of corn and explain the industrial importance of each part. **07**
(b) Explain in detail about the paddy cleaning using different machines for removal of different impurities. **07**
- OR**
- Q.3** (a) Why rice is polished? Explain in detail the horizontal abrasive polisher. **07**
(b) Briefly explain the post milling operations carried out to improve the quality of wheat flour. **07**
- Q.4** (a) Explain the followings: **07**
i) Hydrothermal treatment of grains
ii) Hydrogenation of oil
(b) Discuss the processing of deoiled cake for preparation of protein rich products. **07**
- OR**
- Q.4** (a) Write short notes on: **07**
i) Thermal properties of grains
ii) Soybean processing
(b) Describe the nutritional significance and objectives of milling of pulses and oilseeds. **07**
- Q.5** (a) Write short notes (any two): **07**
i) Beall degermer
ii) Hydroclone
iii) Break rolls
(b) Describe the process of crude oil refining. **07**
- OR**
- Q.5** (a) State the appropriate justifications for the following statements: **07**
i) Parboiled rice behaves in many respects quite differently from the raw rice.
ii) In modern roller flour mills, the different wheat are blended prior to milling or extracted flours are blended before utilization.
(b) Describe the mechanical methods of oil extraction. **07**
