

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code: 2151406****Date: 27/11/2018****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** (a) Define parboiling of paddy and state the importance of parboiling. **03**
- (b) What is soft wheat and explain the industrial importance of soft wheat. **04**
- (c) Enlist the components of supply chain of food grains and discuss the various distribution channels of wheat in India. **07**

- Q.2** (a) Enlist the steps involved in refining of crude oil and explain any one steps in detail. **03**
- (b) Define/ explain the terms: **04**
- i) Carborandum ii) Conditioning of pulses iii) Gota iv) Pitting of legumes
- (c) Explain the process of separating immature paddy from brown rice using compartment separator. **07**

OR

- (c) Explain the principle involved in rice grain cracking during milling and explain the remedial measures to overcome the rice grain cracking problem. **07**
- Q.3** (a) State the objectives of wheat conditioning. **03**
- (b) What is scalping? State the importance of scalping from milling point of view. **04**
- (c) Explain the various pre-treatments required to oilseeds prior to oil extraction. **07**

OR

- Q.3** (a) State the importance of club wheat. **03**
- (b) State the characteristics of different types of corn. **04**
- (c) Write down the nutritional significance of soybean seeds and briefly discuss the scope and status of soybean processing in India. **07**

- Q.4** (a) State the objectives of hydrothermal treatment to grains. **03**
(b) Explain the important features of modern methods of pulse milling over traditional methods. **04**
(c) Explain the process of pneumatic rice bran separation with neat labelled sketch. **07**

OR

- Q.4** (a) Write the significance of determination of physico-chemical properties of food grains. **03**
(b) Explain the various factors affecting milling characteristics of pulses. **04**
(c) What is custom blending of wheat? Explain the process of manufacturing wheat flour for bread manufacturing from soft wheat. **07**
- Q.5** (a) Discuss the advantages and limitations of solvent extraction method over mechanical methods. **03**
(b) Write short notes: **04**
1. Strength of wheat flour
2. Degerming of corn.
(c) Explain the traditional home scale methods of milling of pulses. **07**

OR

- Q.5** (a) Explain the working of Hydraulic Press for oil extraction. **03**
(b) Briefly describe the cleaning process of corn before milling. **04**
(c) Explain the modern method (CFTRI method) of milling of pulses. **07**
