

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Examination June- 2010****Subject code: 141404****Subject Name: Technology of Food Grains****Date: 19 / 06 /2010****Time: 10.30 am – 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)** Explain in detail the extraction of starch from corn by wet milling. **07**
(b) Answer the following. **07**

1. List factors affecting pulse milling.
2. What is rancidity of oil?
3. List machinery used in pulse milling.
4. Give effect of moisture on grain properties.
5. Give uses of porosity.
6. What is thermal property?
7. List impurities of crude oil.

- Q.2 (a)** What is speciality wheat flour? Explain the procedure for the preparation of speciality wheat flour. **07**

- (b)** 1. Explain the following. **04**
i. Hysteresis ii. Hydrothermal
iii. Terminal velocity iv. Bleaching
2. Explain mechanical oil extraction method. **03**

OR

- (b)** 1. Explain the following.
i. Cleaning and separation of processes of grain. **3.5**
ii. Solvent extraction method. **3.5**

- Q.3 (a)** Enlist various unit operations of modern roller wheat flour mill and explain in detail about the different types of rollers used. **07**

- (b)** Explain how the modern rice mill is different from the conventional rice mill. **07**

OR

- Q.3 (a)** Describe the following. **07**

- i. Supply chain of grain.
- ii. Oil seed preparation before oil extraction.

- (b)** Explain effect of temperature on quality parameters of grain. Also discuss biochemical properties. **07**

- Q.4 (a)** Draw the morphological structure of corn showing different parts. Enlist various commercial products which can be prepared from corn. **07**

- (b)** What is parboiling? Explain the different properties of parboiled rice. **07**

OR

- Q.4 (a)** Discuss in detail. **07**
i. Commercial pulse milling.
ii. Byproducts from cake.
- Q.4 (b)** Explain the following. **07**
i. Process of preparation of groundnut butter.
ii. Chemical composition of grain.
- Q.5 (a)** Explain in detail the various unit operations of modern rice mill and state the importance of return paddy. **07**
- (b)** Write short notes on following **07**
1. Storage of paddy and rice 2. By products of rice mill
- OR**
- Q.5 (a)** Write short notes. **07**
i. Refining of oil ii. Wet and dry milling of pulses.
- (b)** Describe in detail modern CFTRI method of pulse milling with flow diagram. **07**
