

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-V(NEW) EXAMINATION – SUMMER 2022**

**Subject Code:3151406**

**Date:07/06/2022**

**Subject Name:Technology of Grains**

**Time:02:30 PM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

**Q.1 (a)** Enlist and state the importance of different parts of paddy grain. **03**

**(b)** State the purpose of following machines: **04**  
i.Abrasive polisher ii.Sieve iii.Destoner iv. Compartment type separator

**(c)** Why crude oil is not suitable for consumption? Explain the process of refining of crude oil. **07**

**Q.2 (a)** Explain the working of ‘Screw press’. **03**

**(b)** Explain the traditional ways for milling of pulses. **04**

**(c)** What is scalping? Explain the scalping process of paddy with neat sketch. **07**

**OR**

**(c)** Explain in detail the purpose and process of conditioning of wheat. **07**

**Q.3 (a)** Write the classification of Wheat grain. **03**

**(b)** Enlist the various unit operations of rice milling and state their functions. **04**

**(c)** How the fissure development takes place during the drying of grain and suggest the remedy to avoid the fissure development on the surface of rice. **07**

**OR**

**Q.3 (a)** State the ideal conditions for the safe storage of paddy. **03**

**(b)** Explain the process of germ separation during wet milling of Corn. **04**

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

1. Cleaning of Wheat

## 2. Types of Corn

- Q.4** (a) Write a short note on 'Drying of pulses' **03**  
(b) Discuss the factors affecting milling time and quality of pulses. **04**  
(c) How the oilseeds are prepared before oil extraction? Explain. **07**

**OR**

- Q.4** (a) Explain the significance of determination of physico-chemical properties of food grains. **03**  
(b) What do you understand by the term 'Antinutritional factors' and state the methods of their removal from the legumes. **04**  
(c) What is protein isolate? Explain the process of preparation of protein isolate. **07**

- Q.5** (a) State the components of 'Supply Chain' of food grains. **03**  
(b) Briefly explain the modern method (CFTRI method) of milling of pulses. **04**  
(c) Explain the process of starch extraction from Corn by dry milling process. **07**

**OR**

- Q.5** (a) Write down the nutritional significance and processing importance of soybean seeds. **03**  
(b) Enlist the byproducts of Rice milling industry and state their utilization. **04**  
(c) What is turbo milling? Explain the process of turbo milling of Wheat. **07**