

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

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

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2021**

**Subject Code:3151406**

**Date:17/12/2021**

**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)** What do you understand by soft and hard pulses and give one example of each type. **03**

**(b)** Distinguish between the disc shelling and rubber roll shelling of paddy. **04**

**(c)** Explain the supply chain of wheat in India. **07**

**Q.2 (a)** Explain the importance of paddy cleaning prior to milling. **03**

**(b)** Explain the principle involved in effective separation of bran from Wheat flour. **04**

**(c)** Briefly discuss the benefits of modern methods of milling pulses over traditional methods and explain the CFTRI method of pulse milling. **07**

**OR**

**(c)** Explain the dry and wet methods of pulse milling. **07**

**Q.3 (a)** Enlist and state the importance of different species of wheat. **03**

**(b)** Write a short note on 'Soybean processing' **04**

**(c)** Briefly explain the different rice polishers. **07**

**OR**

**Q.3 (a)** State the ideal storage conditions for Wheat flour. **03**

**(b)** Explain briefly the various pre-treatments required to oilseeds prior to oil extraction. **04**

**(c)** What is parboiling of Paddy? Explain the modified pressure process for parboiling of Paddy. **07**

**Q.4 (a)** Explain the importance of air classification of speciality Wheat flours. **03**

- (b) Explain the morphological structure of corn with neat sketch. **04**
- (c) Write short notes on: **07**  
i) Components of modern wheat flour mill.  
ii) Bleaching of Wheat flour.
- OR**
- Q.4** (a) How the parboiled rice is different from raw rice? **03**
- (b) Distinguish between whole wheat flour and refined wheat flour. **04**
- (c) Explain the wet milling process of corn milling. **07**
- Q.5** (a) Write a short note on 'Hydrothermal Treatment to Grains' **03**
- (b) What is hydrogenation of oil? Describe the process of hydrogenation of oil. **04**
- (c) Write a detailed note on 'Oil refining'. **07**
- OR**
- Q.5** (a) Enlist the parts of wheat grain and write their importance. **03**
- (b) What is protein isolate give the flow chart of preparation of protein isolate. **04**
- (c) Explain the mechanical methods of oil extraction. **07**