

*Total number of printed pages:*

**Programme (UG)/6th /UFET611**

**2024**

**Food Product Technology-IV (Bakery, confectionary & extruded products)**

*Full Marks : 100*

Time : Three hours

*The figures in the margin indicate full marks for the questions.*

*Answer any five questions.*

1. a) What is bran, germ and endosperm of wheat? 3
- b) Write flour classification mentioning chemical and technological parameters. 6+6
- c) What are the main baking ingredients and additives for bread/cake/biscuit? 5
2. a) Write assessment of dough rheology for mixing, proofing and baking performance. 15
- b) How shortening helps to get soft texture of baked product? 5
3. a) What is the role of emulsifier and stabilizer in dough development? 6
- b) How gluten network formation and starch gelatinization help to develop texture of baked product? 8
- c) Write Maillard reaction. 3
- d) Why fat acidity estimation of four sample is important? 3
4. a) Write the steps of bread making. 4
- b) How yeast is effective in bread making? Mention biochemical reactions. 6
- c) What is baking powder? What is baking soda? What is the difference? How do they act in leavening baked product? What is white bread mold? 2+2+1+3+ 2
5. a) How redox reagents help to achieve uniform baking performance? 5
- b) Write name of high intensity alternative sweeteners used in baking. 5
- c) Why degassing of dough is required? 5
- d) How glycemic index of bakery products can be lowered selecting suitable ingredients? 5
6. a) What are the sensory attributes of bakery product? 6
- b) Write suitable packaging material for bread, cake and biscuit with 6

justification.

- c) Write the steps of chocolate making process 8
7. a) What is extrusion cooking process? 6
- b) Write their types with specific application 6
- c) Write the physical and chemical reactions that occur in food during extrusion cooking? 8

