

M. Tech Odd Semester Examination, February, 2023

Agricultural Engineering

(1st Semester)

Course No.: 1AE214

(Bakery and Confectionary Products)

Full Marks: 70

Pass Marks: 28

Time: 3 hours

- Note:**
1. Attempt 05 (Five) questions by taking one form each unit.
 2. Begin each answer in a new page.
 3. Answer parts of a question at a place.
 4. Assume reasonable data wherever required.
 5. The figures in the right margin indicate full marks for the question.

UNIT-I

1. (a) Enlist the different ingredient used in bread making. Discuss briefly straight dough method and sponge dough method. 8
- (b) Describe the role of milk and sugar in bakery industry 6
2. (a) Enlist different methods of bread preparation and describe any two methods. 8
- (b) Describe the role of enzyme in bread baking. 6

UNIT-II

3. (a) Discuss in detail the following step in bread preparation 8
 - i. Baking
 - ii. Proofing

Turn Over

- (b) Differentiate between 6
 - i. Hard wheat and soft wheat
 - ii. Bread mixing and cake mixing
- 4. (a) Discuss the role of yeast as a bakery ingredient along with its different marketed types. 7
- (b) Describe the process for crackers preparation. 7

UNIT-III

- 5. (a) Enlist the various mixing methods in cake and describe any two methods in detail. 7
- (b) Write short notes on 7
 - i. Cake formula
 - ii. Antioxidant
- 6. (a) Enlist methods of making a cake. Describe any one method in detail. 7
- (b) What are leavening agents? What are their functions in bakery industry? 7

UNIT-IV

- 7. (a) Write the flow sheet for chocolate manufacturing and discuss the critical step in chocolate manufacturing. 7
- (b) Enlist various crystalline sugar confectionery product and discuss the process of any one in detail. 7
- 8. (a) Explain the followings with respect to sugar.
 - i. Fermentation
 - ii. Browning

- iii. Hydrolysis
- iv. Crystallization

- 8. (b) Briefly explain the role of thickeners on the quality of confectionary. 4

UNIT-V

- 9. (a) Enlist the characteristics of flour. Describe any two characteristics. 7
- (b) Write different type of water. Describe the function of water in baking. 7
- 10. (a) Explain the batch making process of caramel. 9
- (b) Explain the role of oil and fat in bakery by giving two example each 5
