Ex/PG/FTB/PC/T/111/2025

# M.TECH. FOOD TECHNOLOGY AND BIOCHEMICAL ENGINEERING

## FIRST YEAR FIRST SEMESTER EXAM 2025

### Advanced Food Processing Technology

Time: 3 hrs. Full Marks : 100

**Part – I (50 Marks)**

Answer any five questions ( 5 x 10 = 50 )

1. Why is sensory evaluation of food done by a panel of judges and not by an individual judge? How many members are generally taken for trained, semi-trained and untrained panel of judges? 5+5

2. What are the different classes of tests employed for sensory evaluation of food , their questions of interest, the types of tests done and the characteristics of the panelists? 10

3. Describe how triangle test, duo-trio test and paired comparison tests are done citing examples in each case. 10

4. In wine sensory research under descriptive sensory evaluation, what qualities the judges should have? How is the sensory evaluation of wine and the related products done? 10

5. How would you define the hedonic rating test? Describe the scale of hedonic test. What is the primary purpose of hedonic scale of rating? 3+4+3

6. What are the benefits and applications of high pressure processing of food? 5+5

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ADVANCED FOOD PROCESSING TECHNOLOGY

PART-II (50) FM- 100

Answer 1 and 2 and any one from the rest

1 How plasma can be helpful for drying of Food Material. Explain the mechanism of degradation of micotoxin by cold plasma. Whole Egg and milk sterilization, where cold plasma is more useful and why? 10+7+3=20

2 Discuss the principle and mechanism of Radio Frequency methods. Discuss its application in food processing. How can you develop a microwave sterilization process- discuss with challenge. 10+10=20

3 What types of cold plasma is suitable for food industry use and why? Discuss the production process of that plasma. 5+5=10

4 What are the difference of conventional heating process and ohmic heating process? What are the factors which affects the ohmic heating process? 5+5=10