

**B.E. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING SECOND YEAR
SECOND SEMESTER EXAM – 2025**

Subject : FOOD PROCESS TECHNOLOGY- I Time : 3 hr Full Marks : 100

Part I (50 marks)

Use Separate Answer scripts for each Group

Answer any five questions from the following:

1. What is the difference between hard curing, light curing and pickle curing method? What are the common spoilages found in salted fish? 6+4=10
2. What do you mean by hot and cold smoking? Explain the preservative effect of smoke. What are the composition of Torry droplet and volatile fraction of smoke? 4+3+3=10
3. What are the essential functions of ice in the process of onboard storage of raw fish? What should be the ideal size of ice crystals during storage-explain with justification. What are the reason of gutting of fish during storage? 4+3+3=10
4. With diagram explain the working principle of different type of air blast freezer. 10
5. How fish are graded by sensory method? What are the disadvantages of the sensory method? Explain any two chemical method for assessment of quality of fish. 4+2+4=10
6. What is the importance of purity of salt in brining of fish? What are the advantages of brining? Why fatty fishes are never brined? How curd formation in canned fish can be prevented? 4+2+2+2=10
7. What is minced fish? With diagram explain the working principle of a deboning machine. How “Kamaboko” products are classified? 1+5+4=10
8. Write short note on any two:- 5+5=10
 - i. Fish protein isolate
 - ii. Fish hydrolysate
 - iii. Fish gelatin

Ref. No. : Ex/FTBE/PC/B/T/224/2025

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Part II (50 Marks)

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Answer Question no. 6 and any three from the rest.

1. With a neat diagram show the different major cuts of pork. What are the different classes of meat we get from animals? 10+5
2. State the theories governing the water holding capacities of meat? State the various reasons of development of rancidity in meat. 5+10
3. What is the effect of sodium chloride as a curing agent on meat? Why one has to be extremely careful while curing meat with sodium nitrite? Describe the process of Artery Pumping in curing. 4+5+6
4. What are the purposes of smoking of meat? State the effects of phenols and carbonyl compounds evolved from smoke on meat. Why is the temperature of smoke generation important? 6+4+5
5. With a suitable diagram describe the internal structure of the Egg. What are the physical changes that take place when the egg deteriorates under storage? 10+5
6. Write short notes on: (any one) 5
 - (I) Bound and Immobilised water present in meat
 - (II) Cooked sausage.
 - (III) Dry ageing of meat.