

Ref. No. : Ex/FTBE/T/313/2018(S)

Name of the Examinations: **B.E. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING THIRD YEAR FIRST SEMESTER SUPPLEMENTARY EXAM - 2018**

Subject : **FOOD PROCESS TECHNOLOGY- I**

Time : **3 Hrs**

Full Marks : **100**

**PART - I (50 Marks)**

**Instructions : Use Separate Answer scripts for each Part**

**Answer Question no 5 and any two from the rest**

1. (a) State what are the different classes of meat with the names of the source animals and their age group. What are the characteristics of the noble cuts of meat? 5+3  
(b) What are the three forms in which water is present in meat? Differentiate between water holding capacity and water binding capacity of meat. 8+4
  
- 2 (a) Why is meat cured? What is the action of ascorbic acid on meat as curing agent?  
Why is the excess use of nitrite has a toxic effect on meat? 2+3+5  
(b) Describe the process of single needle injection, multiple needle injection and arterial injection curing of meat? 10
  
3. What is the purpose of smoking in meat? State the influence of phenols, organic acids and carbonyl compounds from smoke on meat. How is the temperature of smoke generation important for smoked meat? 6+10+4
  
4. What are the different types of sausages available in market? Draw a diagram of the internal structure of the egg and label the different parts. 12+8
  
5. Write short notes on (Any Two): 5 × 2 = 10
  - (a) Sacroplasmic proteins in meat.
  - (b) Brine composition in Wiltshire Curing
  - (c) Characteristics of fat in meat
  - (d) Reasons for physical spoilage of egg.

[ Turn over

**B.E. FOOD TECHNOLOGY AND BIO-CHEMICAL ENGINEERING THIRD YEAR  
FIRST SEMESTER SUPPLEMENTARY EXAM - 2018**

**FOOD PROCESS TECHNOLOGY-I      Time: Three Hours      Full Marks: 100**

**Use Separate Answer Scripts for Part I and Part II**

**Part II (Marks-50)**

1. Write any **one**:

a. What is Surimi? Write a flow sheet of Surimi production. What is Kamaboko? How they are produced and classified? 1+4+1+(2+2)=10

b. What types of microbial spoilages are found in canned fish? What are the causes of it? How microbial spoilage of canned products can be prevented? 5+2.5+2.5=10

2. Write any **one**:

a. What is the rate of freezing? What is the difference between slow and quick freezing? How immersion freezing technique is used for fish preservation? What is the problem of immersion freezing? How this problem can be avoided? 1+2+7+5+5=20

b. How quality of fish is judged by Chemical and Physical methods? What are the treatments done before and after the process of fish freezing? (7.5+7.5)+5=20

3. Write short notes on any **two**: 10+10=20

a. Fish meal

b. Fish sauce

c. Quality changes of fish during drying