	Utech
Name :	<u>A</u>
Roll No.:	A Grand (V Knowledge End Excellent
Invigilator's Signature :	

# CS/B.TECH(FT)/SEM-5/FT-501/2011-12

## 2011

# FOOD PROCESS TECHNOLOGY-II (FISH, MEAT & POULTRY)

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

#### **GROUP - A**

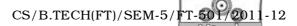
## (Multiple Choice Type Questions)

- 1. Choose the correct alternatives for any ten of the following:  $10 \times 1 = 10$ 
  - i) Major connective tissue protein in animals is
    - a) Myosin
- b) Gelatin
- c) Collagen
- d) Actin
- ii) Sausage is an example of
  - a) fermented meat product
  - b) smoked and dried product
  - c) cured and smoked product
  - d) all of these.
- iii) Post-mortem changes of meat depends mainly on
  - a) carcass quality
  - b) storage temperature
  - c) slaughtering method
  - d) all of these.

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iv)	Scalding temperature of broiler or heavy fowl is			
	a)	60°C for 45 sec	b)	52° C for 5 min
	c)	65° C for 30 sec	d)	$45^{\circ}$ C for 7 min.
v)	The colour of the first cut of fresh meat is			
	a)	red	b)	purple
	c)	pink	d)	brown
vi)	Surimi is prepared from			
	a)	fermented fish	b)	fish fillet
	c)	minced fish	d)	none of these.
vii)	Frozen fish should be stored at			
	a)	– 10° C	b)	– 18° C
	c)	– 5° C	d)	– 40° C
viii)	During spoilage, content of volatile oxidizable nitrogen compounds			
	a)	increases	b)	decreases
	c)	remains same	d)	becomes negligible.
ix)	Blackening of canned fish is a result of			
	a)	poor water quality	b)	poor protein quality
	c)	rancid fat content	d)	high TMAO content.
x)	Struvite formation is a frequent problem in			
	a)	fish drying	b)	fish canning
	c)	fresh fish handling	d)	fish smoking.
xi)	Connective tissue proteins are soluble into			oluble into
	a)	water	b)	acid
	c)	salt solution	d)	insoluble.
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xii) The jelly character of egg white is due to

- a) ovalbumin
- b) conalbumin
- c) ovamucoid
- d) ovomucin

xiii) Egg shell contains high amount of

- a) calcium carbonate
- b) calcium phosphate
- c) calcium sulphate
- d) none of these.

xiv) Egg quality can be evaluated by

- a) Candling
- b) White index
- c) Yolk index
- d) all of these.

xv) Lysozyme is present in

- a) Egg yolk
- b) Egg white
- c) Egg shell
- d) not at all in egg.

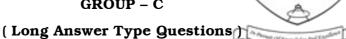
#### **GROUP - B**

### (Short Answer Type Questions)

Answer any *three* of the following.  $3 \times 5 = 15$ 

- 2. What is stunning? What are the different methods of stunning? What is the necessity of stunning? 1 + 3 + 1
- 3. Explain the structure of a lean muscle with a neat diagram. 5
- 4. Name the pigments responsible for meat colour. Explain how meat colour changes with exposure to oxygen. 1+4
- 5. What is liquid smoke? How is it prepared? What are the advantages of liquid smoke over gaseous smoke? 1+2+2
- 6. What is the role of nitrite / or nitrate and sodium chloride in curing of meat.  $2\frac{1}{2} + 2\frac{1}{2}$

#### **GROUP - C**



Answer any three of the following.

 $3 \times 15 = 45$ 

- 7. What is fish protein concentrate? How is it prepared? What are the uses of FPC? Distinguish between different types of FPC, with their characteristics. What is the difference 2 + 6 + 2 + 3 + 2between FPC and fish meal?
- 8. What is the composition of fish muscle? Characterise fish muscle with respect to two of its major constituents. Discuss with the associated biochemical changes during spoilage. Mention two essential fatty acids, available in fish oil.

2 + 6 + 5 + 2

Mention different methods of preservation of fresh fish. 9. Elaborate any two methods with a process flow-sheet. What are the different physical and biochemical changes associated with fish freezing and storage of frozen fish.

2 + 8 + 5

- 10. How is poultry meat classified? With a neat diagram, explain the structure of an egg.
- 11. What are egg products? What are the common uses of eggs in food preparations? Give three examples of processed egg products and how are they prepared? 6 + 3 + 6

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