



Name :

Roll No. :

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.



- 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° 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
- a) water b) acid
- c) salt solution d) insoluble.



- xii) The jelly character of egg white is due to
- ovalbumin
 - conalbumin
 - ovamucoid
 - ovomucin
- xiii) Egg shell contains high amount of
- calcium carbonate
 - calcium phosphate
 - calcium sulphate
 - none of these.
- xiv) Egg quality can be evaluated by
- Candling
 - White index
 - Yolk index
 - all of these.
- xv) Lysozyme is present in
- Egg yolk
 - Egg white
 - Egg shell
 - not at all in egg.

GROUP – B

(Short Answer Type Questions)

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

- What is stunning ? What are the different methods of stunning ? What is the necessity of stunning ? $1 + 3 + 1$
- Explain the structure of a lean muscle with a neat diagram. 5
- Name the pigments responsible for meat colour. Explain how meat colour changes with exposure to oxygen. $1 + 4$
- What is liquid smoke ? How is it prepared ? What are the advantages of liquid smoke over gaseous smoke ? $1 + 2 + 2$
- 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

(Long Answer Type Questions)

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 between FPC and fish meal ? $2 + 6 + 2 + 3 + 2$
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. $2 + 6 + 5 + 2$
9. Mention different methods of preservation of fresh fish. 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. $7 + 8$
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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