53 (FPT 813) FPTC

2013

(May)

FOOD PRODUCT TECHNOLOGY–V

Paper : FPT 813

Full Marks : 100

Pass Marks : 30

Time : Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions out of seven.*

1. *(a)* What are the various stunning techniques used prior to slaughtering ? Explain about each. Which among them is used to obtain tender meat ? 8

   (b) What is the source of energy for contraction of muscles ? Mention the possible by-products formed after utilization of this energy in the presence and absence of oxygen. 5

(c) How does the *pH* of a postmortem muscle decrease ? 2

(d) What do you mean by fabrication ? Briefly classify. 5

2. (a) Explain the structural changes in meat during cooking. 4

(b) What are the various methods of preserving meat ? Briefly explain the principle of *each* method. 10

(c) What are the factors that influence the tenderness of meat ? Explain in detail. 6

3. (a) Write a short note on : 2.5×4=10

(i) DFD Meat

(ii) PSE Meat

(iii) Cold Shortening

(iv) Heat ring.

(b) Differentiate between

(i) Antemortem and postmortem inspection

(ii) Food born, food spoilage and food poisoning microorganism. 2+3=5

(c) What is Rigor Mortis ? What are the factors that can influence this condition ? Explain in terms of change is protein. 5

4. (a) Write a note on nutritional composition of meat. 7

(b) The color of meat changes when exposed to atmosphere over a period of time. Explain the change in color due to oxidation with the change in state of iron. 3

(c) Define oxidative rancidity in fish. What are the changes in meat due to this reaction ? How can we measure the degree of rancidity ? 5

(d) What are the basic factors that influence the growth of bacteria and rate of spoilage ? 5

5. (a) Explain the significance of QIM in the quality assessment of fresh fish ? 5

(b) Write a short note on : 5×3=15

(i) TAC (Total Aerobic count)

(ii) Biogenic amines

(iii) DMA

(iv) Ammonia

(v) Nucleotide catabolites.

6. (a) Classify poultry. What are the causes for spoilage of poultry ? Explain in detail factors that should be controlled to prevent spoilage. 2+6=8

(b) Write a short note on : 4+4=8

(i) Internal egg quality

(ii) Importance of Vit D_3 and Calcium in egg.

(c) Define the terms 4

(i) Star cracks

(ii) Blood spots

(iii) Watery whites

7. (a) Give the significance of nutritional value of egg and its contribution in human diet. 4

(b) Mention the advantages of chicken meat over other meat. 3

(c) What do you understand by SQTS concept ? Explain with an example. 4

(d) Write a short note on 3

(i) Evisceration

(ii) Rendering

(e) Write *any five* functional uses of eggs in various food preparations. Briefly explain various methods used to identify internal defects of eggs. 3+3=6