

ASSIGNMENT BOOKLET

DIPLOMA PROGRAMME IN MEAT TECHNOLOGY (DMT) Academic Session : 2010



**School of Agriculture
Indira Gandhi National Open University
New Delhi, 110068**

Dear student,

As you are aware that for theory, the weightage to the term-end examination will be 80% and the weightage to the continuous assessment will be 20%, here is an instruction for formatting your assignment. There is one assignment for each course i.e. total eight assignments for the programme. Each assignment will be of 50 marks which ultimately will be converted to have weightage of 20 % of theory.

Instruction for formatting your assignment

Before attempting the assignments, please read the following instructions carefully.

1. On top of the first page of your answer sheet, please write the details exactly in the following format.

Enrollment no:.....

Name:.....

Address:.....

.....

.....

Course Code:.....

Course Title:.....

Study Centre:.....

Date:.....

(Name and Code)

Please follow the above format strictly to facilitate evaluation and to avoid delay.

2. Use foolscap size paper for writing your answer.
3. Leave 4cm margin on the top, bottom and left of your answer sheet.
4. Clearly indicate question no. and part of the question being solved while writing answers.

Assignment No.	Date of Submission
Assignment 1 (BPVI-021) and 2 (BPVI-022)	Before 31 st March
Assignment 3 (BPVI-023) and 4 (BPVI-024)	Before 31 st May
Assignment 5 (BPVI-025) and 6 (BPVI-026)	Before 31 st July
Assignment 7 (BPVI-027) and 8 (BPVI-028)	Before 30 th September

5. Assignments have to be sent to the coordinator of your study centre.

6. We strongly suggest that you should retain a copy of your assignment responses.

Wishing you good luck.

Assignment- 1
Course Code: BPVI-021

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) Define food. (1)
b) Classify foods depending upon their nutritional aspect. (3)
c) Narrate the chemical composition of a typical adult mammalian muscle. (6)
- Q.2 a) Define essential amino acids. Give examples. (2)
b) What are simple lipids? (2)
c) Classify vitamins. Write two functions of each fat soluble vitamin. (4)
d) Write the functions of calcium in our body. (2)
- Q.3 a) Write short note on gastric juice. (3)
b) Narrate the digestion of protein and fat in human body. (7)
- Q.4 a) Define food borne intoxication and food borne infection. (2)
b) How do the external factors affecting the growth of microbes in a food? (5)
c) List the chemical and physical agents for controlling the microbial growth. (3)
- Q.5 a) Write the principles of meat preservation. (3)
b) Write short note on irradiation. (3)
c) Narrate the pattern of microbial growth in the food. (4)

Assignment- 2
Course Code: BPVI-022

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) Write the present status of livestock population and meat production in India. (4)
b) Write about day-to-day management of animal for optimum production. (6)
- Q.2 a) Narrate briefly the major components of an abattoir. (6)
b) What points should you consider for selection of the site for an abattoir? (4)
- Q.3 a) What are the objectives of ante-mortem examination? (2)
b) Write the decision/judgement of ante-mortem examination. (4)
c) What are the facilities required for post-mortem examination? (2)
d) List the diseases and conditions for which the carcass is totally or partially condemned. (2)
- Q.4 a) What is meant by stunning? (1)
b) Why CO₂ anaesthesia is advantageous? (2)
c) Write the steps involved in dressing of pig and goat. (4)
d) What do you mean by line dressing system? (3)

- Q.5 a) What do you mean by rendering? List the products obtained by rendering. (2)
 b) List the edible offals obtained from slaughter of an animal. (3)
 c) Define zoonoses. List the meat borne bacterial zoonotic diseases. (3)
 d) Write a note on mad cow disease. (2)

Assignment- 3
Course Code: BPVI-023

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) Draw a diagram to depict the organisation of skeletal muscle from gross structure to molecular level. (5)
 b) How collagen can influence the tenderness of the meat? (3)
 c) Differentiate between skeletal and smooth muscle. (2)
- Q.2 a) Narrate the important events occurred in the muscles after the slaughter of the animal. (4)
 b) Write short note on the following: (6)
 i. Rigor mortis
 ii. Meat protein
- Q.3 a) Describe the factors affecting the composition of meat. (3)
 b) Write about the factors to be considered for the quality grading. (5)
 c) List the wholesale cuts of lamb and pig carcass. (2)
- Q.4 a) Write short notes on Water holding capacity. (3)
 b) Narrate briefly the pre-slaughter and post-slaughter factors affecting meat quality. (7)
- Q.5 a) What do you mean by hot processing? (2)
 b) Write about different freezing methods employed for storage of meat. (4)
 c) Write short notes on the following: (4)
 i. Thawing
 ii. Cold shortening

Assignment-4
Course Code: BPVI-024

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) How meat processing is advantageous? (3)
 b) What is an emulsion? Narrate the factors affecting emulsion stability. (5)
 c) Classify the meat products. (2)
- Q.2 a) List the curing agents. (2)
 b) Illustrate the series of reactions for development of cured colour of meat. (4)
 c) What do you know about dry and pickle curing? (4)

- Q.3 a) List the ingredients used for economic formulation. (2)
 b) Describe briefly the binders used for processing of meat. (3)
 c) What do you mean by enrobing? What are the general steps for preparation of the enrobed product? (5)
- Q.4 a) Write the steps for processing of following: (8)
 i. Sausage
 ii. Ham
 b) What are the different types of spoilage of canned meat products? (2)
- Q.5 Write short notes on the following: (10)
 i. Fermentation
 ii. Hurdle technology
 iii. Canning
 iv. Meat preservation by smoking

Assignment- 5
Course Code: BPVI-025

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) What is the purpose of packaging? (2)
 b) Classify the packaging materials with examples. (5)
 c) What do you mean by aseptic packaging? (3)
- Q.2 a) Write short notes on following: (6)
 i. Vacuum packaging
 ii. Modified atmosphere packaging
 b) How would you like to package cooked meat products and fresh chicken? (4)
- Q.3 a) What do you mean by sensory evaluation? (2)
 b) How would you prepare the meat sample for sensory evaluation? (3)
 c) How hedonic scale can be used for sensory evaluation of sausage? (3)
 d) Define specialized panel and consumer panel. (2)
- Q.4 a) Write short notes on following: (5)
 i. Quality assurances
 ii. Food hygiene
 b) Narrate the principles of HACCP. (5)
- Q.5 a) Define sanitizer. Give examples. (2)
 b) Write the properties of a good sanitizer. (2)
 c) List the national and international regulatory agencies associated with meat production and marketing. (2)
 d) Describe briefly the methods of carcass sanitation. (4)

Assignment- 6
Course Code: BPVI-026

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) Illustrate the structure of an egg with the help of a diagram. (5)
b) Narrate briefly the Indian standards of egg grading. (5)
- Q.2 a) Justify the statement-“Eggs have an excellent nutritive value”. (4)
b) Describe the methods of egg preservation. (6)
- Q.3 a) Write the steps of egg powder preparation. (5)
b) How will you prepare a tandoori chicken? (5)
- Q.4 a) Describe briefly the different sections of the poultry processing plant. (5)
b) Write the steps of fresh poultry processing. (5)
- Q.5 a) Why poultry meat is considered as a good foodstuff for weight control diets? (3)
b) Write about the BIS grading of dressed chicken. (5)
c) What do you mean by automatic poultry dressing line? (3)

Assignment- 7
Course Code: BPVI-027

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) Define animal by-products. Classify meat plant by-products. (3)
b) What are the benefits derived from by-product utilization? (5)
c) What are the poultry by-products? (2)
- Q.2 a) Describe briefly the method of preparation of leather from skin. (6)
b) Enlist the steps of casing preparation. (2)
c) Give examples of six important glands or organs along with their active principles. (3)
- Q.3 a) List the various sections of a by-product plant. (3)
b) What will you do for deodourisation in a by-product plant? (3)
c) Differentiate between dry and wet rendering. (4)
- Q.4 a) Give the flow diagram for preparation of gelatine from bone. (4)
b) What are the uses of hair and wool? (3)
c) Write the uses of animal blood in various industries. (3)
- Q.5 a) Write a short note on compost making by stack method. (3)
b) Describe briefly the treatments of effluents obtained from a meat plant. (7)

Assignment- 8
Course Code: BPVI-028

Maximum marks: 50

Answer all the questions given below.

- Q.1 a) How will you judge and grade the livestock for meat purpose? (3)
b) What are the prevailing methods of sale of livestock in India? (4)
c) What are the problems in marketing of meat and meat products in India? (3)
- Q.2 a) Write about marketing channels existing in India for marketing of meat and meat products. (7)
b) What do you mean by total market demand and market share? (3)
- Q.3 a) How cooking yield of a meat product can be increased? (3)
b) Write about Meat Food Product Order, 1973. (5)
c) What are the main elements of a business plan? (2)
- Q.4 You calculate the production cost of 1kg mutton nuggets assuming that 50 kg emulsion is prepared in a day in the processing unit and 6% flour is used for extension of the product. (10)
- Q.5 a) List the equipments required in a meat processing plant. (2)
b) List the sources of finance for establishing a meat processing plant. (3)
b) What are the essential skills for entrepreneurs? (5)