

ASSIGNMENT BOOKLET

DIPLOMA PROGRAMME IN MEAT TECHNOLOGY (DMT) (Academic Session – 2012)



**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:.....

.....

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Course Code:.....

Course Title:.....

Study Centre:.....

(Name and Code)

Date:.....

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 October
Assignment 3 (BPVI-023) and 4 (BPVI-024)	Before 31 st December
Assignment 5 (BPVI-025) and 6 (BPVI-026)	Before 31 st January
Assignment 7 (BPVI-027) and 8 (BPVI-028)	Before 28 th February

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

Total marks: 50

Answer all the questions given below.

- Q.1 a) What do you mean by protective foods? (2)
b) How do the dietary fibres work in case of diabetes mellitus and obesity? (3)
c) Define essential amino acids. Give examples. (2)
d) What is protein turnover? Name the proteins with high turnover. (3)
- Q.2 a) Classify vitamins. Write two functions of each fat soluble vitamin. (4)
b) What is the role of hormones in lipid metabolism? (3)
c) Write the food source and functions of calcium. (3)
- Q.3 a) Write short note on pancreatic juice. (3)
b) Narrate the digestion of protein and fat in human body. (7)
- Q.4 a) Differentiate between food borne intoxication and food borne infection. (2)
b) How do the external factors affecting the growth of microbes in a food. (6)
c) List the chemical and physical agents for controlling the microbial growth. (2)
- Q.5 a) Write the principles of meat preservation. (4)
b) Write short note on irradiation and cryovac packaging. (6)

Assignment- 2
Course Code: BPVI-022

Total marks: 50

Answer all the questions given below.

- Q.1 a) Write the present status of livestock population in India. (2)
b) In your opinion what are the major constraints affecting India's meat export? (3)
c) Write about day-to-day management of animal for optimum production. (5)
- Q.2 a) Narrate briefly the major components of an abattoir. (8)
b) List the utility services in a modern meat plant. (2)
- Q.3 a) What are the basic considerations for transport of meat animals? (4)
b) Write the decision/judgement of ante-mortem examination. (4)
c) What do you mean by stunning. (2)

- Q.4 a) What is meant by Can pak System? (2)
 b) Why CO₂ anaesthesia is advantageous? (2)
 c) Write the steps involved in dressing of pig and goat. (3)
 d) List the edible offals obtained in a slaughter house. (3)
- Q.5 a) Write the condition for which the carcasses are totally condemned. (2)
 b) What are the facilities required for post-mortem examination of the carcass? (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

Total 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? (2½)
 c) Differentiate between red and white muscle fibre. (2½)
- Q.2 a) Give the flow diagram of post-mortem changes in muscle. (5)
 b) Write the composition of a typical mammalian muscle. (5)
- Q.3 a) What are the basic considerations for meat cutting? (3)
 b) List the wholesale cuts of lamb and pig carcass. (2)
 b) Write about the factors to be considered for the quality grading. (5)
- Q.4 a) Write short notes on following: (6)
 i. Water holding capacity
 ii. Electrical stimulation
 b) Differentiate between PSE and DFD meat. (2)
 c) List the factors affecting tenderness of the meat. (2)
- Q.5 a) Give your opinion about the ideal handling practices of carcass and meat. (5)
 b) Write about different freezing methods employed for storage of meat. (5)

Assignment-4
Course Code: BPVI-024

Total marks: 50

Answer all the questions given below.

- Q.1 a) What is the purpose of meat processing? (4)
b) Define emulsion. Narrate the factors affecting emulsion stability. (6)
- Q.2 Write short notes on following: (10)
i. Binder for meat processing
ii. Hurdle technology
iii. Dry heat cooking
iv. Canning
- Q.3 a) List the curing agents. (2)
b) Illustrate the series of reactions for development of cured colour of meat. (4)
c) Narrate briefly the methods of pickle curing. (4)
- Q.4 a) Write the characteristics of economic formulation. (2)
b) List the ingredients used for economic formulation. (2)
c) Write the importance of enrobing and general steps for preparation of the enrobed product. (6)
- Q.5 a) Write the steps for processing of following: (8)
i. Sausage
ii. Ham
b) What do you mean by fermented meat products? (2)

Assignment- 5
Course Code: BPVI-025

Total 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 is meant 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 fresh mutton and fresh chicken? (4)

- Q.3 a) What are the criteria for being a specialized sensory panellist? (4)
 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)
- 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) Write the properties of a good sanitizer. (2)
 b) List the detergents and sanitizers used in meat plant. (3)
 c) List the national and international regulatory agencies associated with meat production and marketing. (2)
 d) Identify the Critical Control Points (CCP) in a poultry processing line. (3)

Assignment- 6
Course Code: BPVI-026

Total 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) Describe the methods of egg preservation. (7)
 b) How the egg should be handled after collection from layer house? (3)
- Q.3 a) Write the steps of egg powder preparation. (5)
 b) How will you prepare a tandoori chicken? (5)
- Q.4 a) Write the steps of fresh poultry processing. (5)
 b) Describe the design and construction of slaughter hall in a poultry processing plant. (5)
- Q.5 a) What do you mean by automatic poultry dressing line? (5)
 b) Write about the BIS grading of dressed chicken. (5)

Assignment- 7
Course Code: BPVI-027

Total marks: 50

Answer all the questions given below.

- Q.1 a) What are the benefits derived from by-product utilization? (5)
b) Write about poultry by products. (5)
- Q.2 a) Describe the procedure of conversion of skin to leather. (6)
b) Write the defects of hides and skin. (4)
- Q.3 a) List the parts of a by-product plant. (3)
b) What will you do for deodorisation in a by-product plant? (3)
c) Describe briefly the clean section of a by-product plant. (4)
- Q.4 a) Give the flow diagram for preparation of gelatine from bone. (4)
b) What are the quality characteristics of wool? (3)
c) What are the differences between dry rendering and wet rendering? (3)
- Q.5 a) Describe how the meat plant effluents are treated. (10)

Assignment- 8
Course Code: BPVI-028

Total marks: 50

Answer all the questions given below.

- Q.1 a) Write a short note on livestock fair. (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 a note on marketing channels. (5)
b) What do you mean by direct cost, indirect cost and cost analysis? (5)
- 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 chicken sausage assuming that 60 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) If you want to start a chicken dressing cum product processing plant where daily 500 birds will be processed, what will be the invest cost of your project? (8)