

# **ASSIGNMENT BOOKLET**

## **DIPLOMA PROGRAMME IN MEAT TECHNOLOGY (DMT) (Academic Session – 2011)**



**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.

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

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) What do you mean by body building 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 are simple lipids? Give examples. (3)
- Q.2 a) Classify vitamins. Write two functions of each fat soluble vitamin. (5)  
b) What is the role of hormones in lipid metabolism? (3)  
c) Write the functions of the phosphorus in the human body. (2)
- 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. (3)  
b) Narrate the pattern of microbial growth in the food. (5)  
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) What points should you consider for selection of the site for a meat plant? (6)  
b) Write about major components of an abattoir. (4)
- 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 line dressing system? (2)  
b) Why CO<sub>2</sub> anaesthesia is advantageous? (2)  
c) Write the steps involved in dressing of pig and goat. (3)  
d) Write a short note on electrical stunning. (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) Write the objectives of post-mortem examination. (2)  
d) Define zoonoses. List the meat borne bacterial zoonotic diseases. (3)

**Assignment- 3**  
**Course Code: BPVI-023**

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) Narrate briefly the structure of skeletal muscle along with a diagram. (7)  
b) Differentiate between red and white muscle fibre. (3)
- 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. Tenderstretch method for tenderization  
b) Differentiate between PSE and DFD meat. (2)  
c) List the factors affecting tenderness of the meat. (2)
- Q.5 Write short notes on following. (4X 2 ½ =10)  
a) Freezing of meat b) Hot processing  
c) Cold shortening d) Thawing

**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) Classify meat products. (3)  
c) Define emulsion. Write the purposes of emulsion preparation. (4)
- 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 and binding agents. (4)  
b) Illustrate the series of reactions for development of cured colour of meat. (4)  
c) What is meant by pickle curing? (2)
- Q.4 a) Write the characteristics of economic formulation. (2)  
b) Narrate briefly the steps for preparation of restructured meat products. (3)  
c) Write the importance of enrobing and general steps for preparation of the enrobed product. (5)
- 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) Write the functions of a food package? (2)  
b) Classify the packaging materials with examples. (5)  
c) What is meant by retail and bulk 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 cooked 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) Narrate the principles of HACCP . (5)  
b) Write short notes on following: (5)  
i. Quality assurances  
ii. Food hygiene
- 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) Write about the factors used in grading of eggs. (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) Describe the steps of fresh poultry processing. (6)  
b) Nutritive value of poultry meat. (4)
- 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 do you mean by by-products of meat industry? (2)  
b) What are the benefits derived from by-product utilization? (5)  
c) Write short note on poultry by products. (3)
- Q.2 a) Describe the procedure of conversion of skin to leather. (5)  
b) Narrate briefly the steps of casing preparation. (5)
- Q.3 a) What do you know about glandular by-products? (3)  
b) List few equipment used in a by-product processing plant. (2)  
b) List the various sections in a by-products processing plant. (2)  
c) What will you do for deodorisation in a by-product plant? (3)
- Q.4 a) Give the flow diagram for preparation of gelatine from bone. (4)  
b) Give the flow chart for preparation of feather meal? (3)  
c) What are the differences between dry rendering and wet rendering? (3)
- Q.5 a) Write about the production of biogas from meat plant wastes. (4)  
b) Describe briefly the primary treatment of slaughterhouse effluents. (6)

**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) Narrate marketing channels for meat animals and meat products. (8)  
b) What do you mean by direct cost and indirect cost? (2)
- Q.3 a) How cooking yield of a meat product can be increased? (3)  
b) Write about Meat Food Product Order, 1973. (5)  
c) List the sources for long term finance for your business. (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) Write a note on business plan outline. (5)  
b) Write about the essential skills of an entrepreneur. (5)