

# **ASSIGNMENT BOOKLET**

## **DIPLOMA PROGRAMME IN MEAT TECHNOLOGY (DMT)**

**School of Agriculture  
Indira Gandhi National Open University  
New Delhi, 110068.  
2017**

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.

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Enrollment no:.....

Name:.....

Address:.....

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Course Code:.....

Course Title:.....

Study Centre:.....

Date:.....

(Name and Code)

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**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 is meant 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 are simple lipids? Give examples. (3)
- Q.2 a) Classify vitamins. Write one function of each water soluble vitamin. (5)  
b) What is the role of hormones in carbohydrate metabolism? (3)  
c) Write the functions of the phosphorus in the human body (2)
- Q.3 a) Write a note on bile. (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 agents for controlling the microbial growth. (2)
- Q.5 a) Write the principles of meat preservation. (4)  
b) Write short note on vacuum packaging and irradiation. (6)

**Assignment- 2**  
**Course Code: BPVI-022**

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) Write the present status of meat production in India and explain the major constraints affecting India's meat export? (5)  
b) Write about day to day management of animal for optimum production. (5)
- Q.2 a) List the factors to be considered for selection of site for a meat plant and describe any one factor. (5)  
b) Write about major components of an abattoir. (5)
- Q.3 a) What are the basic considerations for transport of meat animals? (4)  
b) Write the objectives and decision/judgement of ante-mortem examination. (6)
- Q.4 a) Write notes on electrical and chemical stunning. (5)  
b) Write the steps involved in dressing of sheep and pig. (5)
- Q.5 a) Write the objectives of post mortem (PM) examination. What are the facilities required for PM examination of carcass? (5)  
b) Define zoonoses. List the meat borne zoonotic diseases. (5)

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

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) Describe the structure of skeletal muscle along with a diagram. (7)  
b) Write a note on connective tissues associated with meat. (3)
- Q.2 a) Define rigor mortis. Explain the stages of rigor mortis. (5)  
b) Give the composition of a typical mammalian muscle. List the factors affecting meat composition. (5)
- Q.3 a) What are the prerequisites of meat cutting? What do you mean by wholesale and retail meat cuts? (5)  
b) Write about the factors to be considered for the quality grading. (5)
- Q.4 a) Write notes on water holding capacity and electrical stimulation (6)  
b) Differentiate between PSE and DFD meat. (4)
- Q.5 Write short notes on the following. (4X 2 ½ =10)  
a) Hot processing                      b) Freezing methods  
c) Cold shortening                    d) Chilling storage of meat

**Assignment-4**  
**Course Code: BPVI-024**

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) Classify meat products and write purposes of meat processing. (5)  
b) Explain any two methods of meat processing. (5)
- Q.2 a) Define curing and explain the methods of dry curing and pickle curing. (6)  
b) Narrate the series of reactions for development of cured colour of meat. (4)
- Q.3 a) What is meant by food additives? Write the functions of any five food additives. (6)  
b) Write the characteristics of economic formulation. (4)
- Q.4 a) Describe the steps for preparation of sausage (5)  
c) What is the purpose of canning? Give the steps for preparation of canned meat product. (5)
- Q.5 a) Write the steps for processing of following: (8)  
i. Restructured meat product                      ii. Fermented meat product  
b) What is the importance of enrobing? (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. What is the difference between retail and bulk packaging? (5)  
b) Classify the packaging materials with examples. (5)
- Q.2 a) Write short notes on aseptic packaging. (3)  
b) Differentiate between vacuum packaging modified atmosphere packaging. (3)  
b) What are the packaging requirements for fresh meat and frozen meat? (4)
- Q.3 a) Define sensory evaluation. What are the criteria for being a specialized sensory panelist? (5)  
b) Explain the use of Hedonic scale for sensory evaluation of sausage. (5)
- Q.4 a) Describe the seven principles of HACCP . (7)  
b).Write a short note on Food hygiene. (3)
- Q.5 a) Give the steps involved in cleaning and sanitation of meat premises. (5)  
b) List the detergents and sanitizers used in meat plant. Write the properties of a good sanitizer. (5)

**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) What is the ideal handling procedure for collection of eggs from layer house? (5)  
b) Describe any two methods of egg preservation. (5)
- Q.3 a) Write about the packaging of eggs. (5)  
b) Narrate the steps of egg powder preparation. (5)
- Q.4 a) Write notes on the following: (6)  
i. Nutritive value of poultry meat ii. Tandoori chicken  
b) Describe an automatic poultry dressing line. (4)
- Q.5 a) Describe the steps of fresh poultry processing. (6)  
b) Explain the Indian grading system for grading of dressed chicken. (4)

**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? Classify these by-products. (4)  
b) What are the advantages of utilization of meat industry by-products? (6)
- Q.2 a) List the steps of conversion of skin to leather. What is tanning? (4)  
b) Describe the steps of casing preparation. (6)
- Q.3 a) What do you know about glandular by-products? (3)  
b) What is rendering? Differentiate between dry rendering and wet rendering. (4)  
c) What should be done for deodorisation in a by-product plant? (3)
- Q.4 a) List the poultry by-products. Give flow chart for preparation of feather meal. (4)  
b) Describe the preparation of following: (6)  
i. Gelatine from bone ii. Blood meal
- 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) Write about transport of meat animals. (5)  
b) Describe any five marketing channels for meat animals and meat products. (5)  
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 the rules and regulations associated with meat products. (4)  
c) List the sources of finance for any business. (3)
- Q.4 a) Write a note on business plan outline. (5)  
b) Write about the essential skills of an entrepreneur. (5)
- Q.5 a) List the equipment 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 cost of your project? (8)