

# **ASSIGNMENT BOOKLET**

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

**School of Agriculture  
Indira Gandhi National Open University  
New Delhi, 110068.  
2014**

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> October
Assignment 3 (BPVI-023) and 4 (BPVI-024)	Before 31 <sup>st</sup> December
Assignment 5 (BPVI-025) and 6 (BPVI-026)	Before 31 <sup>st</sup> January
Assignment 7 (BPVI-027) and 8 (BPVI-028)	Before 28 <sup>th</sup> 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 body building foods? (2)  
b) Classify carbohydrates. (2)  
c) Define essential amino acids. Give examples. (2)  
d) What are the functions of lipids in our body? (2)  
e) Name different myofibrillar proteins. (2)
- Q.2 a) Classify vitamins. Write the functions of vitamin A. (4)  
b) Name at least one condition caused by deficiency of each of the following: vit K, thiamin, riboflavin, and vit E. (4)  
c) Name two hormones secreted from anterior pituitary and two from alimentary canal. (2)
- Q.3 a) Write the functions of the phosphorus in the human body and the clinical disorder caused by deficiency of this mineral. (4)  
b) Write the functions of bioflavonoids. (3)  
c) How does bile salt help in digestion of food? (3)
- Q.4 a) Narrate the digestion of lipid and protein in human body. (7)  
b) Differentiate between food borne intoxication and food borne infection. (3)
- Q.5 a) List the extrinsic parameters of food which affect the growth of microbes. (1)  
b) List the physical and chemical agents for controlling the microbial growth. (2)  
c) Write the principles of meat preservation. (3)  
d) Write short note on following: (4)  
i. Meat preservation by curing  
ii. Hurdle technology

**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. (2)  
b) Write a short note on livestock market. (2)  
c) Write about day to day management of animal for optimum production. (4)  
d) Write a short note on non-conventional meat animals. (2)
- Q.2 a) Explain the factors to be considered for selection of the site for a meat plant. (6)  
b) Write about major components of an abattoir. (4)
- Q.3 a) What facilities should be provided in an utility block of a modern meat plant? (3)  
b) What precautions should be taken during transport of meat animals? (3)  
c) What are the basic considerations for ante mortem examination? (2)  
d) Write a short note on lairage. (2)

- Q.4 Write short notes on the following: (2 ½ x4)
- Chemical stunning
  - Line dressing system
  - Carcass yield
  - Edible and inedible offals from a slaughter house
- Q.5
- Explain the steps of pig carcass dressing. (4)
  - Write about the judgment of post mortem examination. (2)
  - Define zoonoses. List the meat borne diseases. (4)

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

**Total marks: 50**

**Answer all the questions given below.**

- Q.1
- Describe the structure of skeletal muscle along with a diagram. (7)
  - Differentiate between red and white muscle fibre. (3)
- Q.2
- Define rigor mortis. Write the stages of rigor mortis. (1+4)
  - Write short note on the following:
    - Conditioning of meat (2½)
    - Meat protein (2½)
- Q.3
- Write the composition of a typical mammalian muscle. (3)
  - Write short notes on the following:
    - PSE me (2)
    - Tenderstreich method for tenderization (2)
    - Electrical stimulation (3)
- Q.4
- What are the prerequisites of meat cutting? (3)
  - What do you mean by wholesale and retail meat cuts? (2)
  - List the wholesale cuts of buffalo and pig carcass. (2)
  - List the factors used to establish yield grading of beef, pig and goat carcasses. (3)
- Q.5
- Give your opinion about the ideal handling practices of carcass and meat. (4)
  - Write about different freezing methods employed for storage of meat. (4)
  - What is cold shortening ? (2)

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

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) What are the advantages of meat processing? (3)  
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) Describe the methods of curing. (4)  
b) Write the advantages of use of liquid smoke for preparation of smoked meat products. (2)  
c) Give examples of binders, extenders, emulsifiers, preservative, flavour enhancers, spices and condiments used in meat processing. (4)
- Q.4 a) Write the factors for reduction of production cost of meat products. (3)  
b) Narrate the steps of canned meat preparation. (4)  
c) What types of spoilage occurs in canned meat products? (3)
- Q.5 a) Write the steps for processing of sausage. (4)  
b) State the methods of restructured meat product preparation. (4)  
c) 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 are the functions of a food package? (3)  
b) Classify the packaging materials with examples. (5)  
c) Differentiate between retail and bulk packaging. (2)
- 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? (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) Explain the principles of HACCP. (5)  
 b) Write about the quality assurance practices at retail outlets and kitchen level. (5)
- Q.5 a) Write the properties of a good sanitizer. (3)  
 b) List the detergents and sanitizers used in meat plant. (2)  
 c) List the national and international regulatory agencies associated with meat production and marketing. (2)  
 d) Mention the Critical Control Points (CCP) in a poultry slaughter line. (3)

**Assignment- 6**  
**Course Code: BPVI-026**

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) Write about the present status of Indian poultry industry. (4)  
 b) Illustrate the structure of an egg with the help of a diagram. (6)
- Q.2 a) Describe the methods of egg preservation. (6)  
 b) Write about the factors used in grading of eggs. (4)
- 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) Write about the BIS grading of dressed chicken. (4)
- Q.5 a) What are the main features of an automatic poultry dressing line? (3)  
 b) Write the steps of enrobed chicken product preparation. (4)  
 c) List the factors affecting the tenderness of chicken. (3)

**Assignment- 7**  
**Course Code: BPVI-027**

**Total 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) Write short note on poultry by products. (2)
- Q.2 a) Describe the procedure of conversion of skin to leather. (5)

- 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. (2)
- b) What will you do for deodourisation in a by-product plant? (3)
- c) Differentiate between dry and wet rendering. (3)
- d) What do you know about glandular by-products? (2)
- 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. (2)
- d) What is neat's foot oil? (1)
- Q.5 a) Write a short note on compost making by stack method. (3)
- b) Write about the treatment of effluents obtained from a meat plant. (7)

**Assignment- 8**  
**Course Code: BPVI-028**

**Total marks: 50**

**Answer all the questions given below.**

- Q.1 a) What are the problems in marketing of meat and meat products in India? (3)
- b) What measures should be taken to increase the cooking yield of the meat products? (4)
- c) Write a short note on livestock fair. (3)
- Q.2 a) Write about the marketing channels involved in marketing of meat and meat products. (7)
- b) Write a short note on transport of animals. (3)
- Q.3 a) Explain the essential skills of an entrepreneur. (5)
- b) Write a note on Meat Food Product Order, 1973. (3)
- c) What are the main elements of a business plan? (2)
- Q.4 Calculate the production cost of 1kg mutton sausage assuming that 60 kg emulsion is prepared in a day in processing unit and 5% flour is used for extension of product. (10)
- Q.5 a) List the equipments required in a medium level meat processing plant. (3)
- b) List the sources for long term finance for your business. (3)
- c) What do you mean by direct cost, indirect cost and market share? (4)