

ASSIGNMENT BOOKLET

PG DIPLOMA

IN

**FOOD SAFETY AND QUALITY MANAGEMENT
(PGDFSQM)**

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 70% and the weightage to the continuous assessment will be 30%. The continuous assessment is in form of assignments. There is one assignment for each course i.e. total five assignments for the programme. The four assignments are of 50 marks and one assignment (MVPI-001) is of 25 marks. The marks obtained will be converted to have weightage of 30%. Instructions to format your assignments are as follows:

Instructions to format your assignments

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 (MVP-001) and 2 (MVPI-001)	Before 31 st October 2012
Assignment 3 (MVP-002) and 4 (MVP-003)	Before 31 st December 2012
Assignment 5 (MVP-004)	Before 28 th February 2013

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: MVP-001

Maximum marks: 50

Note: Attempt all the questions.

- Q.1 What are the foods obtained from plant sources? Characterize them into different groups and explain post harvesting processing (primary, secondary and tertiary) of plant sourced foods. (10)
- Q.2 (a) Define water activity and the moisture sorption isotherm and give their significance in the quality of food. (5)
- (b) Define carbohydrates and how they are classified? Give the structure of carbohydrates and explain their physico-chemical properties. (5)
- Q.. (a) What are enzymes? Give the major classes of enzymes and type of reactions catalysed by them. Describe their role in food industry. (5)
- (b) Explain the effect of food processing on vitamins and minerals. (5)
- Q.4 (a) What is the importance of sampling in analysis of food products? Describe different sampling techniques. How would you ensure that the sample drawn is a representative sample? (5)
- (b) What are different chromatographic techniques used for food analysis? Describe the applications, different type of detectors and sampling techniques used in gas chromatography. (5)
- Q.5 Explain the nutraceuticals, Traditional Indian Foods (including Ayurvedic medicinal foods), genetically modified and organic foods. (10)

Assignment - 2
Course Code: MVPI-001

Maximum marks: 25

Note: Attempt all the questions.

- Q.1 What is the importance of microorganisms in food? Explain the bacterial growth curve. (5)
- Q.2 Enumerate different factors which influence the food spoilage and common methods of food preservation. (5)
- Q.3 Describe different food borne diseases and their causative agents. What are the reasons for emerging food borne disease and why new food borne diseases threats occur? (5)
- Q.4 Describe the methods for detection and confirmation of coliforms. (5)
- Q.5 Give the benefits of rapid detection techniques in microbiology and explain immunological methods of rapid detection. (5)

Assignment - 3
Course Code: MVP-002

Maximum marks: 50

Note: Attempt all the questions.

- Q.1 Give the salient features of Food Safety and Standards Act, 2006 and Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011. (10)
- Q.2 What is Codex Alimentarius? Describe the structure and functioning of Codex Alimentarius Commission (CAC). Explain the procedure used for development of standards. (10)
- Q.3 What are WTO and its two important agreements? Explain the similarities and differences between the two agreements. Describe the procedure followed for settling the disputes. (10)
- Q.4 (a) Explain the basic features of the Export (Quality Control and inspection) Act, 1963. What structures and schemes are under operation in order to facilitate the export of food products from our country? (5)
- (b) What are important export regulations and promotion bodies and describe role played by them in food safety and quality management. (5)
- Q.5 (a) Give the salient features of plant quarantine (Regulation of import into India) order, 2003 (5)
- (b) Describe the powers and functions of Bureau of Indian Standards in relation to food safety and quality control. (5)

Assignment - 4
Course Code: MVP-003

Maximum marks: 50

Note: Attempt all the questions.

- Q.1 Define food safety and explain various hazards to safe food. Describe sources of contamination and identify the steps to be taken for protection of foods from these contaminants. (10)
- Q.2 (a) Define the term "Quality". Identify the facilitators for adopting quality as an important pillar for conducting the business. What are basic tenets and benefits of TQM? (5)
- (b) Explain the three-Ds and 7-S of the project management. What are the 7-S of the Project Management? Explain them. (5)
- Q.3 (a) Define the risk analysis in relation to food safety and give its components. Explain general principles and steps involved in carrying out risk management framework. (5)
- (b) Describe the risk assessment framework suggested by the codex and responsibilities of safety manager in guiding the risk assessment. (5)

- Q.4 Describe the principles and steps involved in the implementation of HACCP in a food industry. Develop a Hazard analysis worksheet covering critical control points operating limits and verification activities for a food processing plant packaging pasteurized milk/ fruit juice. (10)
- Q.5 (a) Describe the important elements of general principles of food hygiene and Good Manufacturing Practices (GMPs) in a food processing plant. (5)
- (b) What is traceability according to ISO definition? Describe objectives, rationale and components of traceability. (5)

Assignment - 5
Course Code: MVP-004

Maximum marks: 50

Note: Attempt all the questions.

- Q.1 (a) Identify important management systems (along with numbers) applicable to food processing and explain the salient features of the occupational health and safety management system requirements. (5)
- (b) Describe the important features of ISO 19011:2002 and procedure for planning, implementation and control of audit activities. (5)
- Q.2 Describe the documentation structure and clauses and their interpretation of ISO-9001:2008. Develop a plan and procedure for certifying a food retail company at either end of the supply chain (inbound and outbound logistics). (10)
- Q.3 Describe the key elements and benefits of ISO 22000 and clause wise interpretation. Develop a plan and schedule for certifying a food processing plant producing UHT processed product. (10)
- Q.4 Describe the salient features of ISO 17025. Develop a guidelines/procedure to take NABL accreditation for a food laboratory? (10)
- Q.5 Describe the salient features of important retail standards. Reflect on implementation aspects in reference to our food processing industry. (10)