

ASSIGNMENT BOOKLET

PG DIPLOMA

IN

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

Academic Session: 2017



**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 theory courses assignments are 50 marks and one integrated course MVPI001 is of 25 marks. The assignment awards will be converted to have weightage of 30% of theory marks. 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. The assignment should be hand written
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. The assignment should be written by the students in their own handwriting.

Assignment No.	Date of Submission
Assignment 1 (MVP-001) and 2 (MVPI-001)	Before 31 st October
Assignment 3 (MVP-002) and 4 (MVP-003)	Before 31 st December
Assignment 5 (MVP-004)	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: MVP-001

Maximum marks: 50

Note: Attempt all the questions.

- Q.1. (a) Describe status and future prospects of the Food Processing Industry in the country. 5
(b) Enlist important major and minor constituents of food and explain their importance. 5
- Q.2. (a) Define nutraceuticals. Give examples of five functional foods and their associated benefits. Reflect on regulation issues related to Nutraceuticals. 5
(b) Describe important physico-chemical properties of the carbohydrates. Give the structure and nutritional importance of dietary fiber. 5
- Q.3. (a) Define immobilized enzymes and give an example of its application in food industry. 5
(b) What are Emulsions? Give examples of naturally occurring emulsions. 5
- Q.4. (a) What is importance of sampling plan in analysis of food products? Enlist various sampling methods/ techniques and give basic requirements of a good sampling method. 5
(b) Describe principle and procedure of the Kjeldahl method used for protein determination. 5
- Q.5. (a) Describe principle and procedure used for the Atomic Absorption Spectroscopy (AAS) in food analysis. 5
(b) Enlist basic methods of processing the foods. Explain principle and processes used under the thermal processing. 5

Assignment - 2
Course Code: MVPI-001

Maximum marks: 25

Note: Attempt all the questions.

- Q.1. Enlist important microorganisms present in food under major groups such as mold, yeast and bacteria. How do we classify bacteria on the basis of their morphology? 5
- Q.2. Describe intrinsic and extrinsic parameters affecting microbial growth in a food system. 5
- Q.3. What is fermentation? Explain various types of food fermentation with examples. 5
- Q.4. Enlist various enumeration techniques and suggest their appropriate applications in various food systems. 5
- Q.5. Describe principle and working of the flow cytometry. 5

Assignment - 3
Course Code: MVP-002

Maximum marks: 50

Note: Attempt all the questions.

- Q.1. Explain salient features of the Food Safety and Standards Act, 2006 and Food Safety and Standards (Licensing and Registration of Food Businesses) Regulations, 2011. 10
- Q.2. Describe important features of the earlier existing PFA and Essential Commodities Act, 1955. 10
- Q.3. Define the Codex and its functions. What is its role in improving free trade? Describe standards setting process followed by the Codex. 10
- Q.4. (a) Explain the similarities and differences between SPS and TBT Agreement. 5
(b) Describe process and procedure for obtaining Export Certification System for the dairy products. 5
- Q.5. (a) Give salient features of the Plant Quarantine (Regulation of import into India) Order, 2003. 5
(b) Describe powers and functions of the Bureau of Indian Standards (BIS) 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. (a) What is food safety? Explain need for safety and quality management in Industry? Describe the emerging concerns in food safety? 5
(b) Describe various sources of contamination and identify steps to be taken for protection of foods from contaminants? 5
- Q.2. (a) Define Total Quality Management and give its benefits. Enumerate dimensions of quality with respect to a manufactured food and for a service. 5
(b) Explain three phases of project management, and 7-S framework of project management. 5
- Q.3. (a) Describe the structure of risk analysis. Explain challenges and benefits in application of risk management. 5
(b) State various sources which can be used for scientific information for risk assessment. How risk assessment can be made more transparent? 5
- Q.4. Enlist principles and steps involved in implementation of the HACCP. What is objective of having Prerequisite programme for the HACCP? 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 principles, objectives, potential benefits and elements of Good Agriculture Practices (GAP). 5
(b) Explain the objectives and rationale of traceability? Describe the components of the traceability tool. 5

Assignment - 5
Course Code: MVP-004

Maximum marks: 50

Note: Attempt all the questions.

- Q.1. (a) Enumerate various management systems along with numbers, and explain the salient features of environmental management standard and its requirements. 5
(b) Define the term Audit and explain principles and major activities under Auditing. 5
- Q.2. Explain quality management principles with reference to ISO 9000. Describe documentation structure and important clauses of ISO 9001: 2008/2015 with their interpretation. List mandatory procedures required to be documented as per this standard. 10
- Q.3. List names of ISO 22000 family standards and explain key elements of ISO 22000. Enlist elements of FSMS documentation structure and describe the salient features of each element. 10
- Q.4. Enlist five main clauses of the ISO 17025. Define accreditation and give the procedure for having NABL accreditation. Explain sample registration. Which are the quality control measures available to a chemical laboratory for monitoring analytical performance? 10
- Q.5. Describe salient features of the BRS Food Standard and IFS. Identify the issues and challenges in implementation in reference to our food processing industry. 10