

ASSIGNMENT BOOKLET

Bachelor of Science (Food Safety and Quality Management) (BSCFFSQM)

Academic Sessions: July 2025 and January 2026

Course: BPVC-102 - FOOD CHEMISTRY AND NUTRITION



School of Agriculture
Indira Gandhi National Open University
New Delhi – 110 068
July 2025 and January 2026

SUBMISSION OF ASSIGNMENTS

Course Code	Last Date for Submission of Assignments at LSC/PSC	
	July 2025 Session	January 2026 Session
BPVC - 102	30 th March 2026	30 th September 2026
For other courses of semester one, kindly refer to the concerned assignment		

Note:

- Kindly submit your assignments at the concerned Learner Support Centre (LSC)/Programme Study Centre (PSC) within the due date as mentioned above.
- Before submitting the examination form (March and September for June and December Term-end examinations, respectively), it is mandatory to submit the assignments.

Dear learner,

Welcome to “Bachelor of Science (Food Safety & Quality Management) (BSCFFSQM) programme.

You are requested to go through the course materials first and then prepare the assignment response following the instructions. Your responses should not be a complete reproduction of the textual material/blocks provided for self-learning purposes. Please submit your assignment responses at the Learner Support Centre (LSC) allotted to you on or before the due date. The assignments will be evaluated by the Counsellors at the Learner Support Centre (LSC)/Programme Study Centre (PSC) and the respective weightage of marks will be added to the percentage of marks obtained at the term-end examination. Each candidate will have to complete assignments in order to appear in the term-end examination. Candidates are, therefore, advised to take assignments seriously and submit them on time.

General Instructions

- 1) If you fail to submit the assignments before the due date of the particular session, you are supposed to attempt a fresh set of assignments for subsequent sessions.
- 2) Write your Enrolment Number, Name, Full Address and Date of Despatch at the top right-hand corner of the first page of your answer sheet.
- 3) Write the Programme Title, Course Title, Assignment Code, Code and Place of the Study Centre on the left-hand corner of the first page of your answer sheet.

The top of the first page of your answer sheet for each assignment should be as follows:

Programme Title	Enrolment No
Course Code	Name
Course Title	Address
Study Centre Code.....
(Place)	Date

Note: Students are required to follow this format strictly.

- 4) Your answer sheet should be complete in all respects. Make sure that you have answered all the questions in the assignments before you submit them. Incomplete answer sheets will yield poor marks.
- 5) As far as possible, you are advised to give the relevant points from the course material and elaborate their answers and explanations in their own language instead of reproducing the language of the course materials.
- 6) You are advised not to copy from the study material while attempting the assignments. In case it is found that the assignments have been copied from the study material, you will be awarded zero marks.
- 7) Avoid copying from the answer sheets of other students. If copying is noticed, the assignments of such students will be rejected.
- 8) Use only foolscap size paper for your answers, ordinary writing paper, neither too thick nor too thin, will do. Assignments should be handwritten. Typed assignments are not acceptable.
- 9) Leave 3” margin on the left and at least 4 lines in between each answer in an assignment. This will enable your Counsellor to write useful comments in appropriate places. Write the question number for each answer clearly.
- 10) The coordinator of your LSC/PSC will return the evaluated assignments to you. This will also include a copy of the assessment sheet containing global comments of the evaluator on your performance in the assignments. This will enable you to improve in your future assignments as well as in the term-end examinations.
- 11) The Assignments should be sent or submitted to the Coordinator/ Programme In-charge of the Learner Support Centre/PSC allotted to you.

Before attempting the assignments, please read the instructions carefully.

Wishing you all the best for the successful completion of the BSCFFSQM programme.

HAPPY LEARNING!

Programme Coordinators (BSCFFSQM)

SEMESTER – 2

DISCIPLINE-SPECIFIC CORE COURSE

COURSE CODE: BPVC-102

COURSE TITLE: FOOD CHEMISTRY AND NUTRITION

Assignment has two parts. Submit both parts together.

Maximum Marks: 100

PART – A: ASSIGNMENTS

Attempt all questions. All questions carry equal marks. Write your answers in about 500 words.

Marks: 5x10=50

1. Discuss the significance of water activity in controlling the physical, chemical, and biological properties of foods. Give two real-life examples where it influences shelf life, and suggest one method to control it in a chosen food product. 10
2. Discuss the composition and sources of lipids in foods. Identify five food products you regularly consume that contain lipids. Classify lipids based on their structure. 10
3. Describe the physiological functions of minerals in the human body. Explain their applications in the food industry, and critically analyse the consequences of deficiency or excess of any one mineral in the diet. 10
4. Compare the nutrient composition of milk, meat, eggs, and fish. Highlight one unique nutrient advantage of each and explain its contribution to human health. Suggest dietary situations where one food could substitute for another, and justify your choice. 10
5. Define food additives and describe their functional properties. Provide at least three real-world examples of food additives used in packaged foods and explain the purpose of each. 10

PART – B: ACTIVITIES

Perform all activities. Submit the evidence (activities notebook, charts etc.) of any FIVE Activities. For details, kindly refer to Block 5: Activities Manual. Marks: 5x10=50

Activity 1: To observe the changes during dry heating of sugar.

Activity 2: To identify and categorise the preservatives used in beverages, pickles, baked and canned products.

Activity 3: To boil eggs and observe the changes in the physical state.

Activity 4: To observe the changes in colour, texture and odour of roasted and unroasted semolina and gram flour.

Activity 5: To study the rancidity of oils.

Activity 6: To prepare a collage of Vitamin A rich foods.

Activity 7: To prepare a chart depicting the inter-relationship between the metabolism of carbohydrates, lipids, and proteins.

Activity 8: To prepare curd and learn the science behind it.

NOTE:

For the assignment questions of other generic courses you have opted for in the 2nd semester i.e. Minor Vocational Course, Ability Enhancement Course (AEC) and Value-Added Course, kindly download them (search course codes in the format i.e. BEVAE-181, select the correct session and download them) from the assignment section of the IGNOU website (<https://www.ignou.ac.in/studentService/download/assignments>).