

DPVCPO

**ASSIGNMENT BOOKLET
FOR
ACADEMIC YEAR 2013**

**Diploma in Production of Value Added Products from
Cereals, Pulses and Oilseeds
(DPVCPO)**

Note: First of all read the assignment/questions and instructions carefully and identify the components of an assignment. You should read the relevant sections and sub-sections of a unit while preparing your responses and write answers in your own words. Your responses should not be a verbatim reproduction of the textual materials/blocks provided for self-learning purposes. We also suggest that, you may read additional materials available in your study centre or in any other library before preparing your responses. But extra reading is not a must to answer these assignments.



**School of Agriculture
Indira Gandhi National Open University
New Delhi -110068
2013**

Dear student,

Welcome to the “Diploma in Production of Value Added Products from Cereals, Pulses and Oilseeds” (DPVCPO) programme. 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%. The continuous assessment is in form of assignments. 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. Therefore, you are advised to take assignments seriously and submit them in time. 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 4 cm margin on the top, bottom and left of your answer sheet.
4. Students are advised to give the relevant points from the course material and elaborate their answers and explain in their own language instead of reproducing the language of the course materials.
4. Clearly indicate question no. and part of the question being solved while writing answers.

Assignment No. Date of Submission

Assignment 1 (BPVI-031) and 2 (BPVI-032)	Before 30 th September
Assignment 3 (BPVI-033) and 4 (BPVI-034)	Before 30 th November
Assignment 5 (BPVI-035) and 6 (BPVI-036)	Before 31 st January
Assignment 7 (BPVI-037) and 8 (BPVI-038)	Before 15 th March

5. The Assignments should be sent or submitted to the Programme In-charge (PIC) of the Study Centre allotted to you.

6. We strongly suggest that you should retain a copy of your assignment responses.

Happy Learning! Best of luck!

Note: Minimum 50% marks in Continuous Assessment i.e., each assignment in each course is required for completion of a course for DPVCPO Programme.

School of Agriculture

*Indira Gandhi National Open University,
Maidan Garhi, New Delhi-110068, India.*

Course Code: BPVI-031
Course Title: Food Fundamentals

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks

1. What do you understand by material handling? Enumerate the various considerations for selection of material handling device?
2. What is the effect of temperature and moisture in the post harvest management of grains?
3. Explain the basis for selection of mechanism for clearing and grading.
4. What are the advantage and limitations of mechanical harvesting over traditional harvesting?
5. What do you understand by centrifugal force? Explain it mathematically and define its terms also.
6. Differentiate between AC and DC.
7. What do you mean by solid-liquid extraction also explain the procedure for liquid-liquid extraction?
8. Define drying and explain the drying curve for the food material with an neat diagram.
9. What are the main objectives of cooking and processing of foods? Describe the effect of processing and storage on nutritive values of food.
10. Write about different anti microbial agents used in food.

Course Code: BPVI-032
Course Title: Food Microbiology

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks.

1. Differentiate between bacteria and fungi (Molds).
2. Describe the effect of moisture on microbial growth.
3. Classify the food on the basis of nutritional composition.
4. Define zoonotic diseases and classify them.
5. Define mico-toxins and explain their harmful effects.
6. What do you understand by water activity of a food? Explain its role in spoilage of food material.
7. What are different additives used in food and explain their role?
8. Differentiate between HTST and UHT processing treatments.

9. Why is *Clostridium botulinum* a major threat in canned products?
10. Explain the food borne diseases with the help of neat flow diagram.

Course Code: BPVI-033

Course Title: Milling of Wheat, Maize and Coarse grains

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks

1. Explain the role of detacher in flour mills? List different types of detacher available to flour milling industries.
2. What do you understand by cleaning and explain how first cleaning of wheat is different from second cleaning?
3. What is conveyor? List different types of conveyor used in food industry.
4. What is infestation? List the different methods used for controlling infestation of wheat.
5. What do you understand by purifier and on what principle it operates? List the main parts of a purifier.
6. Explain the nutritional properties of different coarse grains?
7. In a milling operation, 250 kg of wheat was received having 11% moisture but for proper milling it has to be increased to 14.2% moisture. Calculate the amount of water is to be added.
8. Explain the importance of different coarse grains on human health?
9. What do you mean by sieving? Explain its importance in flour milling process.
10. Explain the process of traditional milling of coarse cereals with the help of neat flow diagram.

Course Code: BPVI-034

Course Title: Baking and Flour Confectionery

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks

1. Give the composition of flour? How it is related to end product quality?
2. Explain with the help of schematic diagram the process of adding additives in the flour mill.
3. What is the traditional formulation of Compressed's yeast? Why yeast is stored at low temperatures?
4. What is rheology and discuss its role in grain processing industry?

5. Discuss physic-chemical changes observed during fermentation of dough?
6. Enumerate dough mixing process and discuss its major objectives? List the advantages of vertical mixer over horizontal mixer.
7. Explain with the help of neat flow chart the process of making of whole wheat bread?
8. Why bread has to be cooled before slicing and wrapping?
9. Explain in detail the drying process of pasta.
10. Discuss how Cream biscuits are different from Semi sweet biscuits?

Course Code: BPVI-035
Course Title: Paddy Processing

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks

1. a. Describe the morphological structure of rice grain.
b. Discuss important methods of nursery raising.
1. What are the different factors affecting the physical quality of the paddy?
2. What are the different tests for parboiled rice?
3. How incorrect selection of drying method will affect the grain quality?
4. What do you understand by thermal efficiency of boiler, describe it mathematically and also define its different terms?
5. To ensure cleanliness and hygiene in the godowns/stores what are the important steps?
6. Explain the principles of operation of cylinder separator.
7. Based on use or physical nature of products classify the breakfast cereals.
8. Discuss in detail the Horizontal Friction Polisher and Water Jet Polisher.
9. Explain the use of rice bran as animal feed and human food?

Course Code: BPVI-036
Course Title: Processing of Pulses and Oilseeds

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks

1. Explain how pulses play an important role in human diet?
2. Differentiate between wet and dry method of pulse milling with the help of neat flow diagram.
3. Why cleaning and grading of pulses are an important unit operation in commercial milling?

4. Discuss in detail the agronomic practices followed in soybean cultivation.
5. Why only properly processed soy foods should be consumed? What is soy processing?
6. List the main oilseeds crops grown in India with their uses.
7. Explain why pre-treatment of oilseeds is the important in relation to yield and quality of oil?
8. Explain solvent oil extraction method with the help of neat sketch.
9. What do you understand by Protein Digestibility Corrected Amino Acid Score (PDCAAS) and write value of PDCAAS for common food products?
10. What do you understand by puffing? Why it is done? Discuss method of puffing of pulses.

Course Code: BPVI-037

Course Title: Food Quality Testing and Evaluation

Maximum marks: 50

Attempt all questions. Answer the questions in about 200 words. All questions carry equal marks

1. Define food quality and write its attributes.
2. Discuss the role of AGMARK and BIS in regulating the quality of food products.
3. What do you understand by HACCP? Write its principles.
4. State Newton's Law and differentiates between viscosity and consistency.
5. Describe the colorimetric method for pectin estimation.
6. Define sensory evaluation of food. What are the different methods of sensory evaluation?
7. What do you understand by chromatography and how chromatography methods are classified?
8. What is spectroscopy? Write relationship between absorption and concentration.
9. What is refractometry and for which purpose it is used in food industry?
10. What are the main components of a pH meter?

Course Code: BPVI-038

Course Title: Entrepreneurship and Marketing

Max. Marks: 50

Attempt any five questions. Answer each question in about 700 words. All questions carry equal marks.

1. What do you understand by entrepreneur and entrepreneurship? Discuss the sources from which opportunity for business can be perceived.

2. Discuss the factors to be considered for assessment of the market for a business idea.
3. Define marketing research. Why businessmen conduct the marketing research? Explain the steps involved in marketing research.
4. Explain the ways by which a businessman can counter-act the activities of his competitors.
5. What is meant by project appraisal? What are the aspects taken into account in the project appraisal?
6. Explain the concept of product life cycle. Discuss the marketing strategies to be followed during various stages of product life cycle.
7. Discuss the different types of intermediaries involved in distribution channel. Also discuss the various aspects to be considered in selection of an appropriate channel.
8. Define controlling. Discuss the features and procedure of controlling.