ASSIGNMENT BOOKLET

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

*Assignment for the Academic Year 2012

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.

***Please ignore the Assignment Booklet for 2008 enclosed with the programme guide.**

School of Agriculture
Indira Gandhi National Open University
New Delhi -110068
2012

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%. 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. 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 30th September
Assignment 3 (BPVI-033) and 4 (BPVI-034)	Before 30th November
Assignment 5 (BPVI-035) and 6 (BPVI-036)	Before 31st January
Assignment 7 (BPVI-037) and 8 (BPVI-038)	Before 15th 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!

Dear Learner,

Welcome to the Diploma in Production of Value Added Products from Cereals, Pulses and Oilseeds (DPVCPO) programme.

We hope that you have gone through the Programme Guide for DPVCPO carefully. It is extremely important to complete the assignments within the stipulated time to be eligible to appear for the term-end examination. All the assignments of DPVCPO are Tutor Marked Assignments (TMAs) and are part of the continuous evaluation process.

Before you write the assignments, read the instructions provided in the Programme Guide carefully and go through the course materials. If you have any doubts or problems pertaining to the courses and assignments, contact the concerned academic counsellor at your Study Centre. If you still have problems, do feel free to contact us at the School of Agriculture or Programme Study Centre.

You are requested to go through the course material first and then complete the assignments. Your answers should not be a verbatim reproduction of the textual materials/blocks provided for self-learning purposes. **Please submit your assignments at the Study Centre allotted to you before the due date as mentioned at the top of each assignment sheet**.

Wish you all good luck for successful completion of the programme.

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-110 068, 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 important role temperature and moisture play in safe storage of food grains? Describe safe moisture limits of five important food grains.
2. Discuss the important factors controlling the cleaning and grading operation of grains. Define terminal velocity and how it is correlated with drag coefficient?
3. a. Distinguish between traditional and mechanical harvesting.

   b. Differentiate between traditional and improved storage structures. List two each (traditional and improved) important storages structures used in the country.
4. What are fundamental units and derived units? Differentiate between elastic and inelastic collision.
5. What do you understand by couplings? Explain the purposes for which couplings can be used and list various types of couplings in common used.
6. How physical, thermal and rheological properties of any food material affect the food industry.
7. What are the important food processing machinery for cereals, pulses and oilseeds? Explain the basic design principles of food processing machinery.
8. Write a short note on packaging material. Discuss in detail the primary and ancillary packaging materials.
9. What are the major nutrients found in cereals, pulses and oilseeds? Discuss major functions of carbohydrate, protein, fat, phosphorus and calcium.
10. Explain the Indian food acts, laws and orders dealing with food adulteration?

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. What do you understand by bacteria? List the important groups of bacteria. Classify bacteria according to their morphology.
2. Define water activity. How water is made unavailable to microorganisms?
3. Describe the pulses and legumes contain a number of toxic substances and how it can be prevented?
4. Discuss in detail the mechanism of dehydration. Distinguish between heat and mass transfer theory.
5. What are general considerations in the selection of chemical food additives?
6. What is the need for Food Preservation and discuss in detail the techniques of Food Preservation?

7. What are microbiological standards for processed foods? Discuss the categories of food based on microbial quality.
8. What are the different chemical and physical changes associated with food spoilage, discuss with suitable examples?
9. What are the changes which occur in the food products when they are attacked by microorganisms.
10. Define D-value and Z-value. How these terms are inter-related?

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 importance of mobile pneumatic unit of grain discharge? What are the advantages and disadvantages of pneumatic unloading system?
2. Distinguish between first and second cleaning. Explain various operations performed during first cleaning of wheat with the help of flow diagram.
3. What are the objectives of reduction? Write a note about various arrangements of rolls in a roller mill.
4. What is a detacher? List different important types of detacher available in flour milling industries and explain any one in detail.
5. What are the differences in nutritional properties of different coarse grains and describe their role?
6. What do you mean by milling? Explain the process of oat milling with the help of neat flow chart.
7. Describe the role of sieving in flour milling process. Write a note on the different materials used for sieves?
8. Why bran finishing is required? Describes the different functions of bran finisher.
9. a. Distinguish between static and dynamic pressure.

   b. What do you understand by value addition? Write the various benefits of value addition to coarse grains.
10. Give morphological and inner details of coarse grains and bring out salient differences among them.

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. What do you understand by composition of flour? Describe the important factors which influence the composition of flour.
2. Describe the role of emulsifiers and surfactants.
3. What are the different methods of bread making explain with the help of neat flow chart?
4. Explain Rheology of wheat flour dough.
5. Describe the role of yeast and milk solids in bread making.
6. What are the different varieties of breads popularized in our country? Explain whole wheat bread in detail.
7. Discuss the classification of biscuits based on the type of dough from which the biscuits are made.
8. Discuss in detail the foam and angle food type cake.
9. Discuss physico-chemical characteristics of Durum wheat. Explain the quality evaluation of Pasta products.
10. Write short notes on:
    i. Sponge
    ii. Dough
    iii. Fermentation
    iv. Scaling
    v. Shortening

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. What is the nutritional composition of rice? Classify the whole brown rice grain based on the length.
2. Discuss different quality characteristics of cooked rice? What are the different factors influencing the cooking quality of paddy?
3. Explain the advantages and disadvantages of CFTRI method of parboiling?
4. What is equilibrium moisture content? Write Henderson equation used to represent the equilibrium moisture content and explain each term of it.

5. Discuss the important essential requirements of a boiler.
6. Define cleaning, shorting and grading. Explain the working principle of colour sorter.
7. Explain different precautions that must be taken when the motor and rice milling equipments are installed?
8. What is dehusking of paddy? Explain the process of dehusking of paddy in centrifugal sheller.
9. What are the main differences in preparation of *idli* and *dosa*?
10. What are potential use of rice bran oil explain with the help of neat flow diagram?

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. What role pulses play in agriculture? Discuss important physical and mechanical properties of gram.
2. Describe dry method of pulses milling with the help of neat flow diagram.
3. What are the advantages and disadvantages of home scale method of milling over commercial scale milling?
4. What do you understand by puffing? Why it is done? Discuss method of puffing of pulses.
5. Write the reasons for considering soybean as a major source of vegetable protein.
6. How soy flours are prepared? What are the different types of soy flour?
7. Discuss briefly about by-products. List any three by-products of soy processing.
8. Write a short note on the important of oilseeds in human diet?
9. Explain with the help of neat flow diagram a continuous solvent extraction plant for soybean.
10. What is crude oil? Explain in detail how it is refined?

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. What do you understand by food quality? Discuss important quality characteristics of food.
2. What PFA stands for? What are the salient features of the PFA Act?

3. What is GMP? Write various requirements for GMP for food industry.
4. What you mean by HACCP? Discuss it principles and benefit.
5. Define rheology. Distinguish between Newtonian and non- Newtonian fluids.
6. What do you mean by texture of a material? Explain the typical force deformation curve.
7. What is bacteriological examination of water? Describe the procedure for determination of 'Coliform count'
8. What is chromatography? List different advantages of TLC over paper chromatography?
9. What is the difference between mass and weight? Distinguish between analytical and mechanical single pan balance.
10. What are basic components of spectrophotometer? Explain the principle and working of spectrophotometer.

Course Code: BPVI-038
Course Title: Entrepreneurship and Marketing

Maximum Marks: 50

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

1. What do mean by self employment? Write its benefits.
2. Define entrepreneurship. What is the need for entrepreneurship?
3. How to develop a positive self image to become an entrepreneur?
4. Discuss the sources from where a businessman can derive business ideas.
5. Explain the assessment of market for any business idea?
6. Discuss the common errors in formulation of business plan.
7. Discuss the component of marketing mix.
8. What are the important considerations in procurement of material?
9. Distinguish between direct and indirect distributors?
10. What do you mean by growth? Describe the various factors which drive growth.