

M.Sc. (DFSM)

**Master of Science in Dietetics and Food Service Management
M.Sc. (DFSM)**

2nd Year Assignments

Assignments 1-4

July 2012 and January 2013 Sessions

(These assignments relate to Course MFN-004, MFN-005, MFN-007 and MFN-009)



SCHOOL OF CONTINUING EDUCATION

Indira Gandhi National Open University

Maidan Garhi, New Delhi -110 068

Masters in Degree Programme in Dietetics and Food Service Management M.Sc. (DFSM)

ASSIGNMENTS 1-4

Dear Students,

You have to do five assignments in all to qualify for the first year of M.Sc. (DFSM) degree. For each theory course, you will have to do one assignment. All the assignments are tutor marked (that is, evaluated by the Academic Counsellor) and each Tutor Marked Assignment carries 100 marks. In this assignment booklet there are five assignments and the course-wise distribution of assignments is as follows:

Assignment 1 (TMA-1): based on MFN-004 (Units 1-19)

Assignment 2 (TMA-2): based on MFN-005 (Units 1-18)

Assignment 3 (TMA-3): based on MFN-007 (Units 1-19)

Assignment 4 (TMA-4): based on MFN-009 (Units 1-14)

INSTRUCTIONS

Before attempting the assignments please read the following instructions carefully.

- 1) Write your Enrolment Number, Name, Full Address, Signature and Date on the top right hand corner of the first page of your response sheet.
- 2) Write the Programme Title, Course Code, Course Title, Assignment Code and Name of your Study Centre on the left hand corner of the first page of your response sheet. Course Code and Assignment Code may be reproduced from the assignment.

The top of the first page of your response sheet should look like this:

Enrolment No
Name
Address
.....
Course Title
Assignment No
Date
Programme Study Centre/Study Centre

All Tutor Marked Assignments are to be submitted at the study centre assigned to you.

- 3) Read the assignments carefully and follow the specific instructions if any given on the assignment itself about the subject matter or its presentation.
- 4) Go through the Units on which assignments are based. Make some points regarding the question and then rearrange those points in a logical order and draw up a rough outline of your answer. Make sure that the answer is logical and coherent, and has clear connections between sentences and paragraphs. The answer should be relevant to the question given in the assignment. Make sure that you have attempted all the main points of the question. Once you are satisfied with your answer, write down the final version neatly and underline the points you wish to emphasize.
- 5) Use only foolscap size paper for your response and tie all the pages carefully. Avoid using very thin paper. Allow a 4 cm margin on the left and at least 4 lines in between each answer. This may facilitate the evaluator to write useful comments in the margin at appropriate places.
- 6) ***Write the responses in your own hand.*** Do not print or type the answers. Do not copy your answers from the Units/Blocks sent to you by the University. If you copy, you will get zero marks for the respective question.
- 7) Do not copy from the response sheets of other students. If copying is noticed, the assignments of such students will be rejected.
- 8) Write each assignment separately. All the assignments should not be written in continuity. For each Course use separate sheets or start on the next sheet.
- 9) Write the question number with each answer.
- 10) The completed assignment should be sent to the Coordinator / Programme Incharge of the Study Centre / Programme Study Centre allotted to you. Under any circumstances do not send the tutor marked response sheets to the Student Evaluation Division at Head Quarters for evaluation.
- 11) After submitting the assignment at the Study Centre / Programme Study Centre get the acknowledgement from the Coordinator / Programme Incharge on the prescribed assignment remittance-cum-acknowledgement card.
- 12) In case you have requested for a change of Study Centre, you should submit your Tutor Marked Assignments only to the original Study Centre until the change of Study Centre is notified by the University.
- 13) If you find that there is any factual error in evaluation of your assignments e.g. any portion of assignment response has not been evaluated or total of score recorded on assignment response is incorrect, you should approach the coordinator of your study centre for correction and transmission of correct score to headquarters.

A Note of Caution

It has been noticed that some students are sending answers to Check Your Progress Exercises to the University for evaluation. Please do not send them to us. These exercises are given to help you in judging your own progress. For this purpose, we have provided the answers to these exercises at the end of each Unit. We have already mentioned this in the Programme Guide.

Before submitting your assignment response, please make sure you have taken care of the following points:

- Your roll number, name and address have been written correctly.
- The title of the course and assignment number have been written clearly.
- Each assignment on each course has been written on separate sheets and pinned properly.
- All the questions in the assignments have been answered.

Now read the guidelines before answering questions.

GUIDELINES FOR TMA

The Tutor Marked Assignments (TMA) have two parts:

Section A: Descriptive Questions (80 marks)

In this section, you have to answer ten questions (of 6 marks each).
Answer each question in about 250-300 words.

Section B: Short Answer/Objective Type Questions (20 marks)

This section contains various types of short answer and objective type questions.

POINTS TO KEEP IN MIND

You will find it useful to keep the following points in mind:

- 1) **Planning:** Read the assignments carefully. Go through the Units on which they are based. Make some points regarding each question and then rearrange these in a logical order.
- 2) **Organization:** Be a little more selective and analytical. Give attention to your introduction and conclusion. The introduction must offer your brief interpretation of the question and how you propose to develop it. The conclusion must summarize your response to the question.

Make sure that your answer:

- a) is logical and coherent.
 - b) has clear connections between sentences and paragraphs.
 - c) is written correctly giving adequate consideration to your expression, style and presentation.
 - d) does not exceed the number of words indicated in the question.
- 3) **Presentation:** Once you are satisfied with your answers, you can write down the final version for submission, writing each answer neatly and underline the points you wish to emphasize.

ASSIGNMENT 1 (TMA-1)
Advance Nutrition

Course Code: MFN-004

Assignment Code: MFN-004/AST-1/TMA-1/2012-13

Last Date of Submission: For July 2012 Session : 30th November, 2012

For January 2013 Session : 31st May, 2013

Maximum Marks : 100

This assignment is based on Units 1-19 of the MFN-004 Course.

Section A - Descriptive Questions

(80 marks)

1. a) What do you understand by energy requirement and energy expenditure. Enumerate the factors which are the determinants of our nutritional requirements. (5)
b) Briefly explain the concept of Recommended Dietary Allowances (RDA) and Dietary Reference Intakes (DRI). (5)
2. a) List the different components of energy expenditure. (2)
b) "Different life styles and activity patterns have different levels of energy demands". Elaborate on the statement giving appropriate examples. (4)
c) What is energy imbalance? Briefly explain the consequences of high energy intake. (4)
3. a) Briefly elaborate on the potential health benefits of dietary fibre. (4)
b) What is amino acid score? How will you use it to know the quality of protein in the diet? (4)
c) Briefly comment on the choice of cooking medium you would include in your diet, giving appropriate justification. (2)
4. Briefly describe one major function of the following vitamins in our diet: (2+2+2+2+2)
Vitamin (D)
Vitamin (E)
Thiamine
Pyridoxine
Folate
5. a) Enlist the various functions of calcium. Discuss the factors affecting the availability of calcium in the body. (2+3)
b) What are antioxidants? Briefly describe the role of antioxidants in lipid peroxidation. (2+3)
6. a) Define the following and explain their health benefits: (2½ + 2½ + 2½)
Flavonoids
Polyphenol
Phytoestrogens
b) How would you modify carbohydrate intake in lactose intolerance and diabetes mellitus. (2½)
7. a) Comment on the nutrients need during pregnancy and lactation. (4+4)
b) Enumerate a few features which influence the nutrient needs of adolescent. (2)
8. a) Briefly discuss the major nutritional deficiency diseases in emergencies. (4)
b) What are ergogenic aids? Would you recommend them for sports persons? (2)
c) Give the nutritional recommendation and type of food appropriate for the space missions. (4)

Section B - OTQ (Objective Type Questions)

(20 marks)

- a) Define the following terms in 2-3 sentences each: (10)
- 1) Bioavailability
 - 2) Quetlet's index
 - 3) Resistant starch
 - 4) Chemical score
 - 5) NDP Cal %
 - 6) Colloidal Osmotic pressure
 - 7) Wernicke - Korsakoff syndrome
 - 8) Thermogenesis
 - 9) Hypokalemia
 - 10) Pectin
- b) Give the nutritional requirement (ICMR, 2010 & FAO/WHO, 2004) for the following nutrients for an adult sedentary male. (5)
- i) Protein
 - ii) Iron
 - iii) Folate
 - iv) Zinc (on a moderate bioavailability diet)
 - v) Vitamin 'C'
- c) Give one example for each of the following: (5)
- i) Role of PTH in our body
 - ii) Problems of Adolescence
 - iii) Components of body mass
 - iv) Gene expression process
 - v) Method for assessment of Thiamin status

ASSIGNMENT 2 (TMA-2)

Clinical and Therapeutic Nutrition

Course Code: MFN-005

Assignment Code: MFN-005/AST-2/TMA-2/2012-13

Last Date of Submission: For July 2012 Session : 31st December, 2012

For January 2013 Session : 31st July, 2013

Maximum Marks : 100

This assignment is based on Units 1 -18 of the MFN-005 Course.

Section A - Descriptive Questions

(80 marks)

1. a) Define medical nutrition therapy and discuss the role of a dietitian in nutrition and health care. (2+3)
b) Enumerate the four steps of nutrition care process. Briefly explain the importance of monitoring and evaluation in the nutritional care process. (2+3)
2. a) What are therapeutic diets? Explain its various types. (4)
b) Define parenteral nutrition and highlight its advantages. (3)
c) Discuss the nutritional management goal of atherosclerosis. (3)
3. a) Explain the role of food exchange system and glycemic index in the diet of a diabetic patient. (5)
b) Highlight the role of dietary fibre in management of diabetes. (5)
4. a) Discuss the nutritional management of anorexia nervosa. (5)
b) Briefly describe the medical nutrition therapy for peptic ulcer. (5)
5. a) Discuss the role of diet and physical activity in the management of obesity. (5)
b) What do you understand by GERD? List the dietary considerations in the management of GERD. (5)
6. a) What are the diseases/conditions grouped collectively under the term "Malabsorption syndrome"? Give the nutritional management for any one condition. (2+3)
b) Discuss the medical nutrition therapy for infectious hepatitis. Elaborate on the quality of protein and the type of amino acids you would recommend for these patients. (5)
7. a) Give dietary guidelines for management of a patient suffering from end stage renal disease. (5)
b) What is constipation? What dietary and life style goals would you advocate to prevent constipation. (2+3)
8. a) Discuss the use of mini nutritional assessment tool in assessment of the nutritional status of the elderly. (3)
b) Enlist the nutrient requirements for a low birth weight / preterm infant. (4)
c) What should be the goal of management of preterm infant. (3)

Section B - OTQ (Objective Type Questions)

(20 marks)

Define and / or explain in 2-3 sentences only:

(10)

1. a)
 - i) CHD
 - ii) Xanthoma
 - iii) Homocystinuria
 - iv) PKU food pyramid
 - v) Chronic Pancreatitis
 - vi) Bulimia Nervosa
 - vii) Cancer Cachexia
 - viii) Gout
 - ix) Chylomicron
 - x) Enteric fever

- 2) Differentiate between the following sets of terms:-
 - i) Insulin and Glucagon
 - ii) Nutritive sweeteners and Non nutritive sweeteners
 - iii) Hypoglycemia and Hyperglycemia
 - iv) Primary hypertension and Secondary hypertension
 - v) Glucogenolysis and Gluconeogenesis

(10)

ASSIGNMENT 3 (TMA-3)
Entrepreneurship and Food Service Management

Course Code: MFN-007

Assignment Code: MFN-007/AST-3/TMA-3/2012-13

Last Date of Submission: For July 2012 Session : 31st January, 2013

For January 2013 Session : 31st August, 2013

Maximum Marks : 100

This assignment is based on Units 1 -18 of the MFN-005 Course.

Section A - Descriptive Questions

(80 marks)

1. a) What is a food service establishment? Illustrate the components of a food service systems model. (2+3)
b) Enumerate the major functions of a dietitian in a food service establishment (5)
2. a) Describe the important features/characteristics of different types of food services adopted in the following settings. (3+3)
- Hospital settings
- Airline food service
b) Differentiate between the conventional and the ready prepared food service system. (4)
3. a) Discuss the need and the importance of menu planning in any food service unit. (5)
b) With the help of a flow chart, illustrate the different methods of purchase, one can adopt for a food service unit. Briefly elaborate on any one method. (2+3)
4. a) What do you understand by production scheduling and forecasting? Discuss their importance in a food service operation. (2+4)
b) Explain, how people perform different jobs smoothly in the context of staff scheduling. (4)
5. a) Enumerate the various records you would maintain for the following process: (2+2+2)
 - Production record
 - Receiving
 - Income and Expenditure recordb) Differentiate between the centralized and decentralized delivery system, giving appropriate examples. (4)
6. a) Why staff training is an important activity for every food service establishment? (5)
b) Highlight some important, laws concerning employment in a food service establishment. (5)
7. a) Briefly discuss the recruitment and selection procedure you will adopt for a food service unit. (6)
b) What do you understand by job design? Enumerate its various components. (4)
8. a) Differentiate between plant and equipment. (4)
b) Discuss the importance of sanitation in a food service unit, highlighting the sanitizing agents you will use. (6)

Section B - OTQ (Objective Type Questions)

(20 marks)

1. Define the following terms in 2-3 sentences each:

(10 marks)

- i) Systems approach
- ii) Silver service
- iii) Organization chart
- iv) Essential commodities Act, 1954
- v) FIFO
- vi) Food Danger Zone
- vii) Participative Approach to staff management
- viii) Line and Staff division of Labour
- ix) Food processing continuum
- x) Direct Transmission of disease

2. Differentiate between the following sets of terms, giving examples.

(10 marks)

- i) Directing and Controlling
- ii) Commercial and Non commercial establishment
- iii) Alkaline and Acid cleaning agents
- iv) Safety engineering and Safety enforcement
- v) Blanket purchasing and Cost plant purchasing

ASSIGNMENT (TMA-4)
Research Methods and Biostatistics

Course Code: MFN-009

Assignment Code: MFN-009/AST-4/TMA-4/2012-13

Last Date of Submission: For July 2012 Session : 31st March, 2013

For January 2013 Session : 30th September, 2013

Maximum Marks : 100

This assignment is based on Units 1-18 of the MFN-009 Course.

Section A - Descriptive Questions (80 marks)

There are eight questions in this part. Each question carries equal marks. Answer all questions briefly.

1. a) What do you understand by research process? Discuss the role of hypothesis in research. (6)
b) Discuss the relevance of - Level of Significance and Power - in sample size determination. (4)
2. a) What is descriptive design strategy in epidemiological research? Briefly discuss the different descriptive study design. (6)
b) Differential between the single blind and double blind study. (2+2)
3. a) What is sampling? How do you classify sampling? Explain random, stratified and cluster sampling. (8)
b) List the various types of tools available for data collection while undertaking research. (2)
4. a) Given here are the scores of 20 student who took a theory course in nutrition.
57,58,64,67,67,62,62,63,70,72
73,70,76,76,75,57,80,80,78,78
For these scores present:
i) The frequency distribution and cumulative frequency distribution. (3)
ii) Frequency polygon (2)
b) Enumerate the graph you would prepare for the following, giving their advantages
i) Nominal or ordinal data
ii) Establishing relationship between two variables (2½+ 2½)
5. a) Explain the concept of normal probability distribution. (3)
b) List the steps you will consider for calculation of mean from a grouped data. (4)
c) Consider the following bivariate data.

Infant outcome	Weight gain during pregnancy		Total
	< 8 kg	> 8 kg	
Dead	130	40	170
Alive	470	310	780
Total	600	350	950

Based on the data

- i) Calculate the relative risk of infant death with weight gain of less than 8 Kg during pregnancy;
- ii) Calculate the odds of dead children being born to pregnant woman with weight less than 8 Kg. (1½+1½)

6. a) Given below are the hemoglobin level recorded for 10 subjects in a community study
8.5, 7.5, 12.1, 12.5, 9.0, 11.0, 7.8, 8.2, 9.5, 10.0
Calculate mean, standard deviation and variance for the hemoglobin levels reported above. (6)
- b) Given below are the theory and practical marks for 10 students in a nutrition course.
Theory marks: 46, 55, 52, 59, 63, 47, 56, 50, 51, 55
Practical marks: 78, 49, 84, 75, 58, 80, 45, 47, 44, 60
Establish, whether there is a degree of relationship between the theory and practical marks. Hint: Calculate the Pearson's r. (4)
7. a) List one mortality measure for assessing the health status of children in a community.
How will you measure them? Indicate. (4+4)
- b) Differentiate between two-tailed and one-tailed tests of significance. (2)
8. a) The following table shows the number of males and females who are anemic and non-anemic in a research study.

Subject	Anemic	Non- anemic	Total
Male	10	42	52
Female	43	05	48
Total	53	47	100

- Test whether there is a relationship between anemia and sex status in the population under study. Test at 05 level of significance. (5)
- b) Define and illustrate the concept of confidence interval and degree of freedom with the help of an example. (2½+2½)

Section B - OTQ (Objective Type Questions)

(20 marks)

1. Define the following in 2-3 sentences each: (10)
- Quartiles
 - Z-score
 - Predictive Value
 - Data
 - Nominal scale
 - Quasi experimental design
 - Nominal scale
 - Discrete Variable
 - Sensitivity
 - Ogive
2. Differentiate between the following sets of terms. (10)
- Structured and Unstructured Interview
 - Validity and Reliability of the tool
 - Incidence and Prevalence
 - Descriptive Cross-sectional study and Analytical Cross-sectional study
 - Single blind and double blind study