

M.Sc. (DFSM)

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

# **1st Year Assignment Booklet**

**ASSIGNMENTS 1-6**

**July, 2014/ January, 2015**

**(These assignments relate to Courses MFN-001, 002, 003, 006, 008 and 010)**



**SCHOOL OF CONTINUING EDUCATION**  
**Indira Gandhi National Open University**  
**Maidan Garhi, New Delhi -110 068**

# Masters in Science Degree Programme in Dietetics and Food Service Management

## M.Sc. (DFSM)

### ASSIGNMENTS 1-6

Dear Students,

You will have to do sixteen assignments in all to qualify for a M.Sc. (DFSM) degree. For a 2 credit theory course, you will have to do one assignment and for a 4-6 credit theory course, two assignments. All the assignments are tutor marked and each Tutor Marked Assignment carries 100 marks. In this assignment booklet the course-wise distribution of assignments is as follows:

Assignment 1 (TMA-1): based on MFN-001 (Units 1-12)

Assignment 2 (TMA-2): based on MFN-002 (Units 1-12)

Assignment 3 (TMA-3): based on MFN-003 (Units 1-14)

Assignment 4 (TMA-4): based on MFN-006 (Units 1-18)

Assignment 5 (TMA-5): based on MFN-008 (Units 1-12)

Assignment 6 (TMA-6): based on MFN-010 (Units 1-12)

### 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, Title Assignment Code and Name of our 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.....	

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

**Read the assignments carefully and follow the specific instructions if any given on the assignment itself about the subject matter or its presentation.**

- 3) 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 emphasise. While solving numericals, use proper format and give working notes wherever necessary.
- 4) Use only foolscap size paper for your response and tie all the pages carefully. Avoid using very thick 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.
  - 5) *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.
  - 6) Do not copy from the response sheets of other students. If copying is noticed, the assignments of such students will be rejected.
  - 7) Write each assignment separately. All the assignment should not be written in continuity.
  - 8) Write the question number with each answer.
  - 9) The completed assignment should be sent to the Coordinator of the Study Centre allotted to you. Under any circumstances do not send the tutor marked response sheets to the Student Registration and Evaluation Division at Head Quarters for evaluation.
  - 10) After submitting the assignment at the Study centre get the acknowledgement from the Coordinator on the prescribed assignment remittance-cum-acknowledgement card.
  - 11) 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.
  - 12) 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 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 dispatching your answer script, 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 have two parts.

**Section A: Descriptive Questions****(80 marks)**

In this section, you have to answer ten questions (of 8 marks each). Answer each question in about 250-300 words.

**Section B: Objective Type Questions (OTQ)****(20 marks)**

This section contains various types of objective 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.

**LAST DATE OF SUBMISSION**

For the students who have taken admission in the programme of study in 2014 (i.e., for the academic session commencing in July 2015 for the second year), the last date of submission is indicated on each assignment.

Students must adhere to the last date of submission of assignments notified by the University for appearing in the term-end examination; if the same are earlier than those stated in this assignment booklet.

**ASSIGNMENT 1**  
**(TMA-1)**  
**Applied Physiology (MFN-001)**

**Course Code: MFN-001**

**Assignment Code: MFN-001/AST-1/TMA-1 /14-15**

**Last Date of Submission: For July, 2014 session is 15<sup>th</sup> November, 2014**  
**For January, 2015 session is 15<sup>th</sup> May, 2015**

**Maximum Marks: 100**

**This assignment is based on Units 1 -12 of the MFN-001 Course.**

**Section A - Descriptive Questions**

**(80 marks)**

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

1.     a)     Define physiology. List different nutritional components of food and discuss their interrelationship with physiology. (4)  
       b)     What is a cell? Enumerate the basic parts of a cell. (4)
2.     a)     Differentiate between mitosis and meiosis by discussing the significance of both. (4)  
       b)     Define erythropoiesis. Discuss the factors regulating the process of erythropoiesis. (4)
3.     a)     What do you understand by the terms 'Rh incompatibility' and 'Erythroblastosis foetalis'. Discuss why the risk of Rh incompatibility increases with more number of pregnancies. (4)  
       b)     What are the different defence mechanisms operating in the body? Discuss briefly. (4)
4.     a)     What is Cell Mediated Immune System (CMIS)? Briefly describe the mode of action of CMIS. (3)  
       b)     What is cardiac output? How it is calculated? (2)  
       c)     Briefly discuss the factors affecting peripheral resistance which influence blood pressure. (3)
5.     a)     Graphically illustrate the organs involved in respiration and describe the mechanism of respiration. (5)  
       b)     Give the structure and composition of salivary glands (3)
6.     a)     Give the composition and functions of : (2×3)  
          i)     Gastric juice  
          ii)    Pancreatic Juice  
          iii)   Bile  
       b)     Briefly discuss any one common disorder of digestive tract. (2)
7.     a)     Briefly explain the process of urine formation in the body. (4)  
       b)     Define the term 'Dialysis'. Enumerate and discuss the types of artificial kidney dialysis. (4)

8. a) What are the fundamental processes by which all transport across cell membranes takes place? Discuss briefly. (4)  
 b) What are the functions of the following: (2+2)  
 i) Cerebrum  
 ii) Spinal Cord
9. a) Graphically illustrate the neurons and briefly explain how they communicate with each other. (1+3)  
 b) List the major functions of insulin and explain how insulin secretion is regulated. (4)
10. a) List the various endocrine glands of the body. Enlist the hormones secreted by pituitary gland giving a summary of their major physiological effect. (4)  
 b) Briefly describe the stages of foetal growth and development during pregnancy. (4)

**Section B - OTQ (Objective Type Questions)**

**(20 marks)**

There are two questions in this part.

1. Explain the following in 2-3 sentences each: (10)  
 i) Functional residual capacity  
 ii) Carbon dioxide dissociation curve  
 iii) Emulsification  
 iv) Peristaltic movement  
 v) Auditory Pathway  
 vi) Osteitis Fibrosa Cystica  
 vii) Vas Deferens  
 viii) Amniocentesis  
 ix) Ventricular fibrillation  
 x) Phagocytosis
2. Give the functions/role of the following structure/organs in our today: (10)  
 i) Retina Nerve Cells – Cones  
 ii) Bone Marrow  
 iii) Pineal Gland  
 iv) Cochlea  
 v) Menstrual Cycle  
 vi) Accessory Cranial Nerve  
 vii) Cholecystokinin-pancreozymin (CCK-PZ)  
 viii) Pyloric orifice  
 ix) Bundle of His  
 x) Glucagon

**ASSIGNMENT 2**  
**(TMA-2)**  
**Nutritional Biochemistry (MFN-002)**

**Course Code: MFN-002**

**Assignment Code: MFN-002/AST-2/TMA-2/14-15**

**Last Date of Submission: For July, 2014 session is 30<sup>th</sup> November, 2014**

**For January, 2015 session is 30<sup>th</sup> May, 2015**

**Maximum Marks: 100**

**This assignment is based on Units 1 - 12 of the MFN-002 Course.**

**Section A - Descriptive Questions**

**(80 marks)**

There are ten questions in this part. Each question carries equal marks. Answer all the questions.

1. a) Briefly describe the isomerism of monosaccharide. (2)  
b) Illustrate the process of protein and carbohydrate digestion with the help of a flowchart. (3+3)
2. a) Briefly discuss the role of the following enzymes in the body: (4)
  - Pyruvate dehydrogenase complex
  - 3-hydroxy-3-methylglutaryl-CoA (HMG-CoA) reductase
  - Glutamate dehydrogenase.
  - Carnitine Palmitoyl Transferaseb) Comment on the following: (4)
  - Oxidative rancidity of fats and oils
  - Optical properties of amino acids
3. a) Give the chemical name and structure of the active forms of the following vitamins. Also explain their role in metabolism. (8)
  - Riboflavin
  - Niacin
  - Pantothenic acid
  - Folic acid
4. a) What do you understand by enzyme specificity? List the four different types of enzyme specificities. (4)  
b) Briefly discuss the following: (2+2)
  - Difference in digestion and absorption of dietary triacylglycerols and medium chain triacylglycerols
  - Transport of lipids in blood
5. Work out the energy (ATP) production when glucose is oxidized in the following metabolic pathways: (Illustrate the cycle and work out the ATP production) (4+4)
  - Glycolysis
  - Citric acid cycle

6. a) How the biosynthesis of cholesterol is regulated by the amount of cholesterol in the diet? Explain briefly. (3)
- b) What do you understand by the term eicosanoids? Where are these derived from? (2)
- c) Briefly discuss the metabolism of chylomicrons. (3)
7. a) What is “denovo synthesis” and “salvage pathway” for purine nucleotides? ( $1^{1/2}+1^{1/2}$ )
- b) Briefly discuss the urea cycle. (3)
- c) What are glucogenic amino acids? Give few examples. (2)
8. a) Briefly describe the role of free radicals in the following conditions: (4)
- i) Cardiovascular diseases
- ii) Ageing
- b) Graphically illustrate and explain Vitamin D and Calcium homeostasis. (4)
9. a) Illustrate graphically and discuss the process of light activation of rhodopsin. (4)
- b) Discuss the role of: (2+2)
- Vitamin E as anti-oxidant
  - Vitamin K as anti-coagulant
10. a) Explain the concept of signal generation and “second messengers” in the context of hormone action. (4)
- b) Differentiate between the following disease conditions: (4)
- Pentosuria and Fructosuria
  - Gaucher’s Disease and Niemann-Pick disease
  - Maple Syrup Urine Disease and Alcaptonuria
  - Thalassemia and Sickle cell anaemia



**Section B - OTQ (Objective Type Questions)**

**(20 marks)**

There are three questions in this part

1. Explain the following in 2-3 sentences. Also give the structure wherever possible. (10)
  - i. Autosomal recessive gene
  - ii. Keshan disease
  - iii. Dehydrogenation
  - iv. Porphyrins
  - v. Apolipoproteins
  - vi. Thromboxanes
  - vii. Anaplerotic reaction
  - viii. Isozymes
  - ix. Mutarotation
  - x. Zwitterion
  
2. Give the reactions and the enzymes catalyzing the following reactions: (5)
  - i. Glyceraldehyde – 3 –P to 1,3 bisphosphoglycerate
  - ii. HMG-COA to Mevalonate
  - iii. Glutamine to Carbamoyl phosphate
  - iv. L-methylmalonyl CoA to Succinyl CoA.
  - v. Xanthine to Urate
  
3. Give the chemical structure of the following: (5)
  - i. Ergosterol
  - ii. Amylose
  - iii. Tocopherol
  - iv. Nucleotide
  - v. Acyl Co-A

**ASSIGNMENT 3**  
**(TMA-3)**  
**Food Microbiology and Safety (MFN-003)**

**Course Code: MFN-003**

**Assignment Code : MFN-003/AST-3/TMA-3 /14-15**

**Last Date of Submission: For July, 2014 session is 31<sup>st</sup> December, 2014**

**For January, 2015 session is 15<sup>th</sup> June, 2015**

**Maximum Marks: 100**

**This assignment is based on Units 1 -14 of the MFN-003 Course.**

**Section A - Descriptive Questions**

**(80 marks)**

There are ten questions in this part. Each question carries equal marks. Answer all the questions.

1. a) Define the following terms: (4)
  - i. Probiotics
  - ii. Biotechnology
  - iii. Genetic modification
  - iv. Prions
- b) Enumerate the various types of food hazards by giving examples. (4)
2. a) Discuss the beneficial and harmful effect of micro-organisms in the context of microbiology? (4)
- b) Discuss the factors affecting the growth of microorganisms in food. (4)
3. a) Define food preservation. List the commonly used methods for food preservation, giving examples. (4)
- b) List the microorganism responsible for the following types of spoilage: (4)
  - White spot in meat
  - Putrid and fruity flavour in butter
  - Red rot in egg
  - Green rot in poultry
  - Blue/Black rot in fruits
  - Black spots in Bread
  - Pink colour in Salted Fish
  - Flocculation in canned fruit products
4. a) Differentiate between food borne infections and food borne toxic infections, giving examples. (4)
- b) What are mycotoxins. Discuss the important mycotoxins affecting humans. (4)
5. a) What do you understand by food contamination? Enumerate different kind of naturally occurring and environmental contaminants by giving suitable examples. (4)
- b) What are food additives? Enlist their different classes and explain their role in foods? (4)
6. a) What is the reason for adding colour to foods? List the synthetic food colours permitted for use in India and the foods which include these. (4)
- b) Define the term food adulteration. Give the physical detection methods for the following adulterants: (4)

- i. Sugar solution in honey
  - ii. Mineral oil in oils and fats
  - iii. Chicory in coffee
7. a) What are street foods? Why the safety of street foods is a major concern? (4)
- b) What measures would you advocate to minimize hazards associated with the staff/ workers working in a food service establishment? (4)
8. a) Define the term packaging. Briefly discuss its importance in context to food quality. (4)
- b) What do you understand by risk assessment? (4)
9. a) What is HACCP? Briefly discuss the principles of HACCP. (4)
- b) Enumerate the compulsory national legislations in our country regarding food safety. Discuss any one briefly. (4)
10. a) Elaborate Prevention of Food Adulteration Act by discussing its objectives and important features. (4)
- b) Briefly discuss the role of the following in the area of food standardization and quality control: (2+2)
- i. Codex- India
  - ii. International Organization for Standardization (ISO)

### Section B - OTQ (Objective Type Questions)

(20 marks)

There are two questions in this part.

1. Explain the following briefly in 2-3 sentences each: (10)
- i. Risk communication
  - ii. Nutrition labeling
  - iii. Water activity
  - iv. Epidemic dropsy
  - v. Candling
  - vi. Thermophiles
  - vii. Neurotoxins
  - viii. Phycomycetes
  - ix. Agmark
  - x. Quaternary Ammonium Compounds (QUATS)
2. Describe the relationship between the following sets of terms: (10)
- i. Toxic heavy metal and Food chain.
  - ii. Antinutritional factors and Food contamination
  - iii. Infective hepatitis and Oral Faecal Route
  - iv. Lathyrism and Food adulteration
  - v. Vacuum packaging and Extended shelf life of food
  - vi. Equilibrium Related Humidity (ERH) and Deteriorative changes in foods
  - vii. Sanitary and Phytosanitary (SPS) measures and Food safety
  - viii. Effectiveness of sanitizer and Water hardness
  - ix. High levels of polychlorinated biphenyls (PCB) in blood and Adverse reactions on health
  - x. pH and Spoilage of Meat

**ASSIGNMENT 4**  
**(TMA-4)**  
**Public Nutrition (MFN-006)**

**Course Code: MFN-006**

**Assignment Code: MFN-006/AST-4/TMA-4 /14-15**

**Last Date of Submission: For July, 2014 session is 30th November, 2014**

**For January, 2015 session is 31<sup>st</sup> May, 2015**

**Maximum Marks: 100**

**This assignment is based on Units 1 - 19 of the MFN-006 Course.**

**Section A - Descriptive Questions**

**(80 marks)**

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

Answer all the questions.

1. a) Briefly discuss the role of public nutritionist in health care delivery. (5)  
b) Discuss the health care services delivered at different levels. (5)
2. a) How can a multidisciplinary approach help in solving nutritional problems? (3)  
b) Define food and nutrition security. Describe the determinants of food security. (2+5)
3. a) Briefly discuss the measures you would adopt for the prevention of iron deficiency anaemia. (5)  
b) What do you understand by Protein Energy Malnutrition (PEM)? Briefly explain the sub-clinical forms of PEM. (1+4)
4. a) Discuss the clinical deficiency symptoms of the following micronutrients: (2½+2½+½+2½)
  - Thiamine
  - Iodine
  - Vitamin A
  - Vitamin D
5. a) Briefly describe the following: (2+3+3)
  - Economic consequences of malnutrition
  - Nutrition Monitoring and Surveillance
  - Stages of demographic cycleb) Define the following: (1+1)
  - Life expectancy at birth
  - Net reproduction rate (NRR)
6. What is nutritional anthropometry? Enumerate the methods used in nutritional anthropometry and highlight the methods of classification you would use to assess nutritional status of adults and children. (2+4+4)
7. a) Discuss the role of dietary diversification and food fortification in combating public nutrition problems. (2½+2½)  
b) Enlist the commonly used methods for the assessment of dietary intakes at family/ household and individual level. Explain any one in brief. (2+3)
8. Briefly discuss the following:
  - National Iodine Deficiency Disorders Control Programme (NIDDCP) (4)
  - Mid Day Meal (MDM) Programme (3)
  - Public Distribution System (PDS) and Targeted Public Distribution System (TPDS) (3)

**Section B - OTQ (Objective Type Questions)**

**(20 marks)**

There are three questions in this part

1. Explain the following briefly in 2-3 sentences each: (10)
  - i. Formative evaluation
  - ii. Change agents
  - iii. Delphi technique
  - iv. Supplementary feeding
  - v. National Immunization Schedule
  - vi. Body Mass Index (BMI)
  - vii. Lathyrism
  - viii. Infantile beriberi
  - ix. Trial for Improved practices (TIPS)
  - x. Double fortified salt
  
2. Illustrate the different channels/media you can use for communicating nutrition/health messages to the community. (4)
  
3. Differentiate between the following: (2+2+2)
  - Gomez classification and IAP classification for determination of nutritional status using body weight
  - Direct assessment and Indirect assessment of nutritional status
  - Behaviourist and Cognitive-Gestaltist Theory of nutrition education

**ASSIGNMENT 5**  
**(TMA-5)**  
**Principles of Food Science (MFN-008)**

**Course Code: MFN-008**

**Assignment Code: MFN-008/AST-5/TMA-5 /14-15**

**Last Date of Submission: For July, 2014 session is 31st January, 2015**  
**For January, 2015 session is 31<sup>st</sup> August, 2015**

**Maximum Marks: 100**

**This assignment is based on Units 1 -14 of the MFN-008 Course.**

**Section A - Descriptive Questions**

**(80 marks)**

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

1. a) What do you understand by the term 'Non Starch Polysaccharides' (NSP)?  
Briefly discuss the food applications of any two NSP. (5)  
b) Enumerate the functional role of sugars in food. (5)
2. a) How is autoxidation in fats and oils related to deteriorative changes? Briefly discuss  
the steps involved in it. (5)  
b) Briefly discuss the functional properties of proteins. (5)
3. a) Discuss protein concentrates and their applications in brief. (4)  
b) Discuss the commercial/pharmacological applications of the following in food  
industry: (2+2+2)
  - i. Vitamin A
  - ii. Vitamin B<sub>6</sub> (Pyridoxine Hydrochloride)
  - iii. Sodium
4. a) Comment on the utilization of enzymes in food industry. (4)  
b) Differentiate between sols, gels and emulsions, giving appropriate examples. (6)
5. a) What are the rheological properties of foods? Briefly discuss the methods used to  
measure rheological parameters. (6)  
b) What are the changes/alterations that occur as a result of food processing methods  
in the following: (2+2)
  - i) Cereal, cereal products and legumes
  - ii) Milk and milk products
6. a) List different methods of thermal processing of foods. Discuss any two in brief. (5)  
b) Explain how the process of freezing helps in the preservation of foods? List different  
freezing systems available for foods. (5)
7. a) What are fermented foods? Highlight the types of fermentation and fermented foods  
used world over. (5)  
b) Briefly discuss the advantages and limitations of food irradiation over the conventional  
processes of food preservation. Justify your answer with appropriate examples. (5)
8. a) Describe the primary processing techniques for the following: (6)

- i. Cereals
  - ii. Pulses
  - iii. Oilseeds
- b) What are functional foods? Briefly discuss their role in new product development. (4)

**Section B - OTQ (Objective Type Questions)**

**(20 marks)**

There are two questions in this part

1. Explain the following briefly in 2-3 sentences each: (10)
- i. Conditioning
  - ii. Sensory evaluation
  - iii. Hermetic seal
  - iv. Gelation
  - v. Maillard reaction
  - vi. Tyndall effect
  - vii. Concentration
  - viii. 12 D process
  - ix. Butylated hydroxyanisole (BHA)
  - x. Curdlan
2. Fill in the blanks with the appropriate word: (10)
- i. .... is a polysaccharide prepared by alkaline extraction from red seaweed.
  - ii. The hydrolysis of ester bonds in lipids that may occur by enzyme action, heat or moisture, resulting in liberation of free fatty acids is termed as.....
  - iii. A zinc containing enzyme, which is a conjugated protein is.....
  - iv. Colloidal dispersion of gas bubbles in a continuous liquid or semisolid phase that contains a soluble surfactant are ..... foods.
  - v. The D<sub>2</sub> form of vitamin D is also known as .....
  - vi. Proteases are synthesized in an inactive form as.....
  - vii. Mayonnaise is an example of ..... emulsion.
  - viii. The detection threshold for quinine is ..... ppm.
  - ix. Ionizing radiations can extend the shelf life and inhibit sprouting because they interfere with the .....
  - x. .... along with *P.cerevisiae* plays a major role in the fermentation of vegetables in the brine.

## ASSIGNMENT 6

(TMA-6)

### Understanding Computer Applications (MFN-010)

Course Code: MFN-010

Assignment Code: MFN-010/AST-6/TMA /14-15

Last Date of Submission: For July, 2014 session is 31st March, 2015

For January, 2015 session is 30<sup>th</sup> September, 2015

Maximum Marks: 100

**This assignment is based on Units 1 - 14 of the MFN-010 Course.**

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

1. Enumerate different windows applications. Discuss the functions and steps involved in various window applications. (20)
2.
  - a) Illustrate the main parts and the functions of a computer. (10)
  - b) Briefly describe the internet tools and discuss how to use the internet. (10)
3.
  - a) Create a worksheet using excel having different columns depicting the Serial Number, Name of Subject, Height, Weight and BMI of the subjects. Put in the required data in 20 rows, for the respective columns. Your worksheet should contain the following: (10)
    - Formulas that automatically calculate the average/mean, standard deviation of the height, weight of the subjects and the percentage of subjects underweight, normal and obese based on BMI.
  - b) Enlist the steps involved while performing the following tasks while preparing a PowerPoint presentation: (10)
    - i) Creating presentation using a template
    - ii) Inserting a picture along with text
    - iii) Inserting a table in the slide
    - iv) Use bulleted list in the presentation
    - v) Change the text colour
4. Create a document using Microsoft Word. Enter about four pages. The text should contain: (20)
  - A table with 5 columns, having proper headings and borders.
  - The pages should have margins as what they are in your blocks.
  - The page number should also appear as they do in your printed blocks.
  - Reformat the whole document as to appear in 3 columns. However, you may show the table using more than one column.
  - Demonstrate at least two Auto text features of WORD.

Submit the document in a CD as part of your assignment.
5. Explain the following term with the help of an example/diagram, if needed: (20)
  - i. Check/Scan Disk
  - ii. Main Memory
  - iii. Ergonomics
  - iv. Maintenance of your computer
  - v. Thesaurus
  - vi. Computer Virus
  - vii. Input/output Device
  - viii. Pivot tables
  - ix. Mail Merger
  - x. Networking