

# Uttar Pradesh Rajarshi Tandon Open University, Prayagraj

Assignment-2019-2020

Master of Science Food and Nutrition (M.Sc. FN)

Subject : Food and Nutrition  
Course Title : Applied Physiology

Subject Code : M.Sc. FN 1.1  
Course Code : M.Sc. FN 1.1

Maximum Marks: 30
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## Section - A

Maximum Marks: 18

**Note : Long Answer type Questions. Answer should be given in 800 to 1000 words.**

**Answer all questions. All questions are compulsory**

- 1- Illustrate and label the four chambers of hearts. Briefly describe the blood flow in the heart. 6
- 2- a- Differentiate between the bronchi and bronchioles. 6  
b- Explain the following terms and its significance-
  1. Oxygen dissociation curve.
  2. Pulmonary volumes.
- 3- Write down the functions and hormones secreted by the following glands- 6
  - a. Thyroid gland
  - b. Adrenal gland
  - c. Pituitary gland

## Section - B

Maximum Marks: 12

**Note : Short Answer type Questions. Answer should be given in 200 to 300 words.**

**All questions are compulsory**

- 4- Briefly explain the physiology of lactation. 2
- 5- What type hormones are secreted by the placenta and mention their role also. 2
- 6- What is mitosis? Explain its phases. 2
- 7- Explain the significance of thalamus and Hypothalamus in our brain. 2
- 8- List the functions of bile. 2
- 9- What is cardiac output? How is it calculated? 2

# Uttar Pradesh Rajarshi Tandon Open University, Prayagraj

Assignment-2019-2020

Master of Science Food and Nutrition (M.Sc. FN)

Subject : Food and Nutrition

Course Title : Advanced Nutritional Biochemistry

Subject Code : M.Sc. FN

Course Code : M.Sc. FN 1.2

Maximum Marks: 30
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## Section – A

Maximum Marks: 18

**Note: Long Answer type Questions. Answer should be given in 800 to 1000 words.**

**Answer all questions. All questions are compulsory**

- 1- What are monosaccharide's, Polysaccharides and oligosaccharides ? Give examples with their chemical structure. 6
- 2- What are the chemical active forms of Thiamine, Riboflavin and Niacin? Mention their role in metabolisms. 6
- 3- Write down the significance of citric acid cycle. Describe the reactions involved in ATP generation in the cycle. 6

## Section – B

Maximum Marks: 12

**Note: Short Answer type Questions. Answer should be given in 200 to 300 words.**

**All questions are compulsory**

- 4- Discuss briefly the chemistry and functions of phospholipids. 2
- 5- Present the structure and classification of nucleic acid. 2
- 6- How is biosynthesis of cholesterol regulated by the amount of cholesterol in diet 2
- 7- Define glycolysis and gluconeogenesis. 2
- 8- Write down the functions of plasma proteins. 2
- 9- Define proteoglycans. 2

# Uttar Pradesh Rajarshi Tandon Open University, Prayagraj

Assignment-2019-2020

Master of Science Food and Nutrition (M.Sc. FN)

Subject : Food and Nutrition  
Course Title: Assessment of Nutritional Status

Subject Code : M.Sc. FN  
Course Code : M.Sc. FN 1.3

Maximum Marks: 30
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## Section - A

Maximum Marks: 18

**Note: Long Answer Question. Answer should be given in 800 to 1000 words.**

**Answer all questions. All questions are compulsory**

- 1- Mention various methods of nutritional assessment. Elaborate any two methods. 6
- 2- Discuss in detail the importance of nutritional assessment for healthy as well as hospitalized person. 6
- 3- What is Nutrition Surveillance? Mention any four agencies/organizations involved in nutrition Monitoring /Surveillance in India and type of information collected by them. 6

## Section - B

Maximum Marks: 12

**Note: Short Answer type Questions. Answer should be given in 200 to 300 words.**

**All questions are compulsory**

- 4- Mention 3 main purpose of nutritional assessment. 2
- 5- Write a short note on anthropometry. 2
- 6- What is basic concept of Nutritional Surveillance? 2
- 7- What is need assessment? 2
- 8- List the methods used for assessing dietary intake at various levels. 2
- 9- Define rapid assessment and PRA. 2

# Uttar Pradesh Rajarshi Tandon Open University, Prayagraj

Assignment-2019-2020

Master of Science Food and Nutrition (M.Sc. FN)

Subject :Food and Nutrition

Course Title :Advance Food Analysis

Subject Code : M.Sc. FN

Course Code : M.Sc. FN 1.4

Maximum Marks: 30
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## Section - A

Maximum Marks: 18

**Note: Long Answer type Questions. Answer should be given in 800 to 1000 words.**

**Answer all questions. All questions are compulsory**

- 1- Discuss in detail the different Spectrometric methods. 6
- 2- What is the importance of instrumental measurement of texture of foods dough, fruits and Vegetables and dairy products? 6
- 3- Write in detail about chromatographic separations. 6

## Section - B

Maximum Marks: 12

**Note: Short Answer type Questions. Answer should be given in 200 to 300 words.**

**All questions are compulsory**

- 4- What is separation Techniques of food analysis? 2
- 5- Write a short note on Infrared Spectrometry. 2
- 6- List the major component of gas chromatography. 2
- 7- Briefly describe the use of Radiochemical methods for food analysis. 2
- 8- Describe the functions of Refractometry. 2
- 9- Which instrument is used to measure specific gravity and melting Point? 2

# Utter Pradesh Rajarshi Tondon Open University, Prayagraj

Assignment- 2019-2020

Master of Science Food and Nutrition (M.Sc. FN)

**Subject: Food and Nutrition**

**Course Title: Food Safety and Food Microbiology**

**Subject Code : M.Sc. FN**

**Course Code : M.Sc. FN 1.5**

<b>Maximum Marks: 30</b>
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## Section - A

**Maximum Marks: 18**

**Note: Long Answer type Questions. Answer should be given in 800 to 1000 words.**

**Answer all questions. All questions are compulsory**

- 1- Name a few diseases which are caused due to parasitic infection. Discuss any two in detail. 6
- 2- Elaborate the factors affecting the growth of micro organisms. 6
- 3- Explain the term and their significance in the context of food preservation. 6
  1. Pasteurization
  2. Fermentation
  3. Irradiation

## Section - B

**Maximum Marks: 12**

**Note: Short Answer type Questions. Answer should be given in 200 to 300 words.**

**All questions are compulsory**

- 4- What are the common hazards of food safety? 2
- 5- What do you understand by the positive aspects of microbial growth? 2
- 6- Enumerate the role of bacteria in spoilage of fruits and vegetables. 2
- 7- Suggest measures to reduce exposure to chemical contamination from the environment. 2
- 8- Define food contamination. 2
- 9- Enlist a few general requirements that are specific to the storage of foods. 2

# Uttar Pradesh Rajarshi Tandon Open University, Prayagraj

Assignment- 2019-2020

## Master of Science Food and Nutrition (M.Sc. FN)

**Subject: Food and Nutrition**

**Course Title:** Food Preservation Technology

**Subject Code :** M.Sc. FN

**Course Code :** M.Sc. FN 1.7

<b>Maximum Marks: 30</b>
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### Section - A

**Maximum Marks: 18**

**Note: Long Answer type Questions. Answer should be given in 800 to 1000 words.**

**Answer all questions. All questions are compulsory**

- 1- Describe the need and importance of food preservation. Explain with examples. 6
- 2- Describe various types of food preservation methods. 6
- 3- Describe Indigenous and modern methodology of food preservation techniques. 6

### Section - B

**Maximum Marks: 12**

**Note: Short Answer type Questions. Answer should be given in 200 to 300 words.**

**All questions are compulsory**

- 4- Explain pasteurization. 2
- 5- Explain meat and meat products preservation and processing. 2
- 6- Explain about fermentation with examples. 2
- 7- Explain about fortification with examples. 2
- 8- Explain Indigenous methods of grain storage. 2
- 9- Briefly explain the principle of food preservation. 2

# Uttar Pradesh Rajarshi Tandon Open University, Prayagraj

Assignment- 2019-2020

Master of Science Food and Nutrition (M.Sc. FN)

**Subject: Food and Nutrition**  
**Course Title: Dairy Technology**

**Subject Code : M.Sc. FN**  
**Course Code : M.Sc. FN 1.8**

<b>Maximum Marks: 30</b>
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## Section - A

**Maximum Marks: 18**

**Note: Long Answer type Questions. Answer should be given in 800 to 1000 words.**  
**Answer all questions. All questions are compulsory**

- 1- Explain the need and importance of dairy technology. 6
- 2- Explain the nutritional aspects of milk and its indigenous product. 6
- 3- Explain the importance of milk for the human health. 6

## Section - B

**Maximum Marks: 12**

**Note: Short Answer type Questions. Answer should be given in 200 to 300 words.**  
**All questions are compulsory**

- 4- Discuss about pasteurization. 2
- 5- Discuss about homogenization. 2
- 6- Explain about fortified milk. 2
- 7- Write about dehydrated milk product. 2
- 8- Write about the skim milk. 2
- 9- Write about the soya milk. 2