

# U P RAJARSHI TANDON OPEN UNIVERSITY

## PRINCIPLE OF FOOD SCIENCE

(Assignment)

2017-2018

**Subject: Principle of Food Science**  
**Course Title : Principle of Food Science**

**Subject Code : PGDDTN**  
**Course code : PGDDTN-01**

Maximum Marks:30
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### Section – A

**Note: Long Answer Questions. Answer should be given in 800 to 1000 words.**  
**Each question carries six marks. Answer any three questions.**

**Maximum marks : 18**

1. Explain the functional role of simple sugars in our daily food.
2. What are the deteriorative changes that take place in fats and oils? Discuss briefly
3. Explain the role, type, and source of fat soluble vitamins.
4. What are the changes/alterations that occur as a result of food processing methods in the Fruits and vegetables.
5. Define food preservation. What are the reasons for processing foods? Explain the principles of food preservation.
6. Define the fermentation of foods ? Explain the types of fermentation and fermented foods used world over.
7. Discuss the role of salt, sugar and chemicals in food preservation. Explain your answer with appropriate examples.
8. Explain the functions of food ? Describe the primary processing techniques for the cereal and pulses.
9. Explain the role and type of Enzymes and pigments.

### Section – B

**Maximum marks : 12**

**Note: Short Answer Questions. Answer should be given in 200 to 300 words. Answer any six questions. Each question carry two marks.**

1. Explain the Pasteurization.
2. Explain the Food emulsifiers.
3. Explain the Gelatin properties of protein.
4. Write down about Starch gelatinization.
5. Write down about whey protein concentrates
6. What is Food Irradiation?
7. Differentiate between the Vegetable oil and animal fat.
8. Differentiate between the Simple proteins and conjugated proteins.
9. write about Emulsions
10. write down the importance of protein.
11. Additives – Improvement in food quality
12. What is health and nutrition economics?
13. What is food security?
14. The four phases in the process of nutrition education
15. different types of scales in sensory evaluation.
  
16. Starch gelatinization
  
17. Food foams
  
18. Maillard Reaction

# U P RAJARSHI TANDON OPEN UNIVERSITY

## Advance Public Nutrition

(Assignment)

2017-2018

**Subject: Advance Public Nutrition**  
**Course Title : Advance Public Nutrition**

**Subject Code : PGDDTN**  
**Course code : PGDDTN-02**

Maximum Marks:30
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### Section – A

**Note: Long Answer Questions. Answer should be given in 800 to 1000 words.**  
**Each question carries six marks. Answer any three questions.**

MaximumMarks: 18
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1. Define Nutrition and Interrelationship between nutrition and health. discuss the role of public nutritionist in health care delivery
2. Discuss the concept and scope of public nutrition. Write short note on Kwashiorkor and Marasmus.
3. Explain the consequences/clinical features of the Vitamin A deficiency and Vitamin D deficiency.
4. Explain Nutritional Status Assessment. Highlight the methods of classification you would use to assess nutritional status of person.
5. What is food security? Elaborate on any one food security programme launched by the government in our country.
6. Discuss Mid Day Meal Programme. Briefly explain the techniques you will follow for conducting need assessment in a community.
7. Differentiate between food-based and nutrient-based strategies to combat public nutrition problem, giving appropriate examples.

8. What is growth monitoring? Describe the various food groups and how they help in nutritional planning to meet the daily requirements for Indians.
9. Explain the various health programmes presently being seen by the government.

**Section – B**

**Maximum marks : 12**

**Note: Short Answer Questions. Answer should be given in 200 to 300 words. Answer any six questions. Each question carry two marks.**

1. Iodine Deficiency Programme.
2. Potential challenges and constraints of nutrition education.
3. The four phases in the process of nutrition education.
4. Write down the role of Vital Statistics in Public Health.
5. Differentiate between Epidemic and Endemic.
6. Describe the importance of protein in daily diet.
7. Describe the role of mineral in our body.
8. Role of dietician in our society.
9. Rickets
10. Supplementary food programme.
11. Human health and quality of life.
12. Enlist major nutrition programme.
13. Dietary management
14. Write about balance diet
15. Community participation
16. Disease caused by vitamin A deficiency.
17. Mal nutrition
18. 24 hour recall method



# U P RAJARSHI TANDON OPEN UNIVERSITY

## Clinical and Therapeutic Nutrition

(Assignment)

2017-2018

**Subject: Clinical and Therapeutic Nutrition**  
**Course Title : Clinical and Therapeutic Nutrition**

**Subject Code : PGDDTN**  
**Course code : PGDDTN-03**

Maximum Marks:30
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### Section – A

**Note: Long Answer Questions. Answer should be given in 800 to 1000 words.**  
**Each question carries six marks. Answer any three questions.**

MaximumMarks: 18
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1. What do you understand by therapeutic nutrition? Briefly explain, with the help of an example, the various modifications done to meet therapeutic needs.
2. Briefly discuss the clinical symptoms/complications and dietary management of the following:
  - i) Typhoid
  - ii) Jaundice
3. What are the nutritional requirements of a patient suffering from Acute Renal Failure. What food items should be avoided during this disease?
4. Discuss the etiology, classification and the dietary modification for obesity.
5. Discuss the role of fat, electrolytes and fibre in the nutritional management of hypertension.
6. Discuss the nutritional management of the following:
  - i) Peptic Ulcer
  - ii) Hypertension
7. Give dietary guidelines for management of a patient suffering from Diabetes.
8. Discuss neurological disorders. Give the important goals of nutritional care of persons with neurological disorders.
9. Describe the symptoms, dietary management, and prevention of diarrhoea. Explain the role of Oral Rehydration Solution.

## Section – B

Maximum marks : 12

Note: Short Answer Questions. Answer should be given in 200 to 300 words. Answer any six questions. Each question carry two marks.

1. What is meal planning ? what are the various steps and factors affecting meal Planning?
2. Briefly discuss the Phenylketonuria.
3. What are the metabolic changes occurring during pregnancy?
4. What are infectious diseases? How are they caused?
5. Discuss the basic concept of diet therapy.
6. How excess cholesterol dangerous for health?
7. Explain the term “ special feeding methods?
8. Write the importance of RDA in diet Planning.
9. Iodine Deficiency Disorders (IDD).
10. Foods to be avoided in ketogenic diet.
11. Food sources rich in branch chain amino acids (BCAA).
12. Etiology of Diabetes
13. Write about nutritional care in weight management.
14. Write about the dietary management of gastrointestinal tract disorders.
15. Write about dietary principle of cardiovascular disease.
16. Write about dietary principle of fever.
17. Write about dietary principle of obesity.
18. Write about dietary principle of cancer management.

# U P RAJARSHI TANDON OPEN UNIVERSITY

## Nutritional Biochemistry

(Assignment)

2017-2018

**Subject: Nutritional Biochemistry**  
**Course Title : Nutritional Biochemistry**

**Subject Code : PGDDTN**  
**Course code : PGDDTN-4**

Maximum Marks:30

Note: Long Answer Questions. Answer should be given in 800 to 1000 words.  
Each question carries six marks. Answer any three questions.

MaximumMarks: 18

### Section – A

(30 arks)

1. Describe the classification and function of lipid.
2. Discuss the role of enzymes in the body. Explain the factors affecting enzyme activity.
3. Give the active form of the following with its physiological role.
  - i) Thiamin
  - ii) Vitamin D
  - iii) Niacin
- 4 Explain :
  - i) Cori and Alanine cycle
  - ii) Oxidative Phosphorylation
5. Explain the main principle behind food preservation and enumerate different methods used for food preservation.
6. Describe status and future prospects of the Food Processing Industry in the country.
7. Enlist basic methods of processing the foods. Explain principle and processes used under the thermal processing.

8.Explain fat soluble and water soluble vitamins.

9.Describe food polysaccharides and their Applications.

### **Section – B**

**Maximum Marks: 12**

**Note: Short Answer Questions. Answer should be given in 200 to 300 words. Answer any six questions. Each question carry two marks.**

1. Briefly explain Glycolysis.
2. Give the metabolic significance of Hexose Monophosphate Pathway.
3. Briefly explain the properties of food.
4. Give the steps involved highlighting the disease caused due to the accumulation of the end-product.
5. Write about trace elements.
6. Enlist important major and minor constituents of food and explain their importance.
7. Describe the functions performed by zinc.
8. Differentiate between the Pentosuria and Fructosuria
9. Write about the Insulin and Glucagon.
10. Write about Reducing and Non-reducing sugars.
11. Explain the Saponification
12. Write about Phenylketonuria
13. Briefly describe the isomerism of monosaccharide.
14. What are Emulsions? Give examples of naturally occurring emulsions.
15. Enlist basic methods of processing the foods.
16. Write about Pigments.
17. Write about the Importance of Proteins.
18. Enlist Essential Amino acids.

# U P RAJARSHI TANDON OPEN UNIVERSITY

## Post Graduate Diploma in Dietetics and Therapeutic Nutrition

(Assignment)

2017-2018

**Subject :** PGDDTN  
**Course Title :** PGDDTN

**Subject Code :** PGDDTN  
**Course Code :** PGDDTN-06

MaximumMarks:30

Note: Long Answer Questions. Answer should be given in 800 to 1000 words. Answer any three questions. All questions carry six marks.

### **Section – A**

MaximumMarks: 18

1. What is the importance of microorganisms in food? Describe the causative agents and factors for common food borne diseases.
2. What is fermentation? Explain various types of food fermentation with examples.
3. Define food safety and explain various hazards to safe food. Describe sources of Contamination and identify the steps to be taken for protection of foods from these contaminants.
4. Explain general principles of food safety risk management. Describe the eight steps of preliminary risk management activities.
5. Differentiate between quality control and quality assurance. Describe the dimensions of food quality with respect to manufactured food and for a service.
6. Describe the principles and steps involved in the implementation of HACCP in a food industry.
7. Develop a Hazard analysis worksheet covering critical control points operating limits and verification activities for a food processing plant packaging Pasteurized milk/ fruit juice.
8. Describe the important elements of general principles of food hygiene and Good manufacturing Practices (GMPs) in a food processing plant.

9. List different management systems along with numbers and explain the occupational health and safety management system requirements

### **Section – B**

Maximum Marks: 12

Note: Short Answer Questions. Answer should be given in 200 to 300 words. Answer any six question. Each question carry two marks.

1. Explain the key elements and benefits of ISO-22000:2005.
  
2. Develop a guidelines/procedure to have NABL accreditation for a food laboratory.
3. Describe the salient features of important retail standards.  
What is genetic modification
4. Define food safety. Explain briefly the recent concerns to food safety.
5. Very briefly discuss the various types of food hazards giving examples.
6. What are the chemical changes that take place in food due to spoilage?
7. Explain the main principle behind food preservation.
8. Classify food borne diseases.
9. Classify the naturally occurring toxicants. Discuss any one briefly.
10. List the different anti-nutritional factors present in foods.
11. Enumerate the functions of food additives.
12. Define the term food adulteration. Give the harmful effects of food adulteration.
13. List the various types of packaging employed in the food industry.
14. Give the principles and steps you would follow to develop a HACCP plan.
15. Lathyrism and Food adulteration
16. Flocculation in canned fruit products.
17. Explain the following briefly Nutrition Label, Epidemic Dropsy.
18. Effectiveness of sanitizer and Water hardness.



# U P RAJARSHI TANDON OPEN UNIVERSITY

## Post Graduate Diploma in Dietetics and Therapeutic Nutrition

(Assignment)

2017-2018

**Subject :** PGDDTN  
**Course Title :** PGDDTN

**Subject Code :** PGDDTN  
**Course Code :** PGDDTN-05

MaximumMarks:30

Note: Long Answer Questions. Answer should be given in 800 to 1000 words.  
Answer any three questions. All questions carry six marks.

### **Section – A**

MaximumMarks: 18

1. Describe the important features/characteristics of different types of food services adopted in the following settings.
2. Discuss the need and the importance of menu planning in any food service unit.
3. Enumerate the functions of a manager. Why is planning considered a prime function of a manager?
4. Graphically illustrate a food service system model and briefly enumerate the methods of food service systems.
5. Describe the term food service establishment. Briefly discuss the factors influencing its development.
6. Enumerate the methods used to communicate with the staff in a food service establishment. Discuss different factors acting as barrier in communication channels.
7. Discuss the importance of sanitation in a food service unit, highlighting the sanitizing agents you will use.
8. Discuss the importance of sanitation in a food service unit, highlighting the sanitizing agents you will use.
9. Define the term menu and briefly discuss the steps you would keep in mind while planning and evaluating a menu.

### **Section – B**

MaximumMarks: 12

Note: Short Answer Questions. Answer should be given in 200 to 300 words. Answer any six question. Each question carry two marks.

1. Briefly discuss the three basic approaches the entrepreneurship.
2. What is the need of menu planning in any food service unit?
3. Enlist the type of equipments needed for a cafeteria.
4. Enumerate the functions of a manager.
5. Differentiate between Food Plant and Food Service Operation.
6. Differentiate between Classical Approach and Neoclassical Approaches to Food service Management
7. Differentiate between Safety education and safety enforcement.
8. Briefly discuss the factors influencing its development.
9. Explain the Centralized purchasing.
10. Autocratic approach to staff management.
11. Differentiate between Blanket purchasing and Cost Plan Purchasing
12. Differentiate between Food poisoning and Food infection
- 13 Total Quality Management Approach.
14. Organisation chart.
15. Importance of sanitation in a food service.
16. Graphically illustrate a food service system model.
17. Commercial and Non commercial establishment.
18. Food Danger Zone