THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321] **MARCH 2021** **Sub. Code: 3012**

(AUGUST 2020 EXAM SESSION)

B.Sc. CLINICAL NUTRITION

SECOND YEAR (Regulation 2018-2019)

PAPER II – FOOD MICROBIOLOGY

Q.P. Code : 803012

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. The chemical changes occurring in fish.
2. Benefits of microorganisms in industry.
3. Principles of food preservation.

II. Write notes on: **(8 x 5 = 40)**

1. Factors affecting food safety.
2. Microorganisms that causes spoilage of fruits.
3. Classification of foodborne diseases.
4. Precautionary measures to prevent Bacillus Cereus poisoning.
5. Classification of foods by ease or quickness spoilage.
6. Any three types of physical methods of preservation.
7. Causes of spoilage of canned milk and milk products.
8. Symptoms, foods involved and preventive measures of Hepatitis A.

III. Short answers on: **(10 x 3 = 30)**

1. Food safety.
2. Probiotics.
3. Plasmolysis.
4. Drying.
5. Rancidity.
6. Thermal death time.
7. Common microbes used in food preservation.
8. Goitrogens.
9. Water borne diseases.
10. Pickling.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0222] **FEBRUARY 2022** **Sub. Code: 3012**
(AUGUST 2021 EXAM SESSION)

B.Sc. CLINICAL NUTRITION
SECOND YEAR (Regulation 2018-2019)
PAPER II – FOOD MICROBIOLOGY
Q.P. Code : 803012

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Stages of bacterial growth.
2. Important factors that are involved in meat spoilage.
3. Important food borne infections caused by pathogenic microorganisms.

II. Write notes on: **(8 x 5 = 40)**

1. Lathyrism.
2. Anti-nutritional compounds with some examples.
3. Discuss the ways of waste disposal.
4. Types of pasteurization.
5. Sources of food contamination.
6. Canning.
7. Food borne infection caused by salmonella and preventive measures.
8. Rots that are frequently encountered on eggs.

III. Short answers on: **(10 x 3 = 30)**

1. Prebiotics.
2. Obligate anaerobes.
3. Thermophiles.
4. Plasmoptysis.
5. Modified atmospheric packaging.
6. Candling technique.
7. Thermoduric bacteria.
8. Shigellosis.
9. Fermentation.
10. Measures to prevent rodents and pests.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423] **APRIL 2023** **Sub. Code: 3012**

B.Sc. CLINICAL NUTRITION
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER II – FOOD MICROBIOLOGY
Q.P. Code: 803012

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Factors affecting the Growth of Microorganisms in food.
2. Chemicals used to Control and Destroy Microorganisms in Food.
3. Diseases caused by Mycotoxins.

II. Write notes on: **(8 x 5 = 40)**

1. Causes of Cholera and Preventive measures.
2. Classification of Moulds based on the manner and type in which spores are formed?
3. Preservation of Food using Low Temperature.
4. Fermented Dairy Products.
5. Spoilage of Fruits and Vegetables caused by Fungi.
6. Preventive measures to inhibit the multiplication of Staphylococcus.
7. Chemical changes in Nutrients due to Spoilage.
8. Botulism.

III. Short answers on: **(10 x 3 = 30)**

1. Freezing.
2. Perishable and Non-perishable foods.
3. Food contamination.
4. Facultative anaerobes.
5. Sterilisation.
6. Aflatoxicosis.
7. Parasites.
8. List down few Bacteria present in Water and Soil.
9. Role of Salt or Sugar in Food Preservation.
10. Pasteurization.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423] **APRIL 2024** **Sub. Code: 3012**

B.Sc. CLINICAL NUTRITION
SECOND YEAR (Regulation 2018-2019 onwards)
PAPER II – FOOD MICROBIOLOGY
Q.P. Code: 803012

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss the microbial intoxication and infection of food.
2. Explain fermented milk product with example.
3. Discuss the Waterborne disease and a note on Potable water.

II. Write notes on: **(8 x 5 = 40)**

1. Write a note on sources of contamination of food
2. Explain Moisture content in meat storage.
3. Define Pasteurization.
4. Methods of Food Waste Management.
5. Explain Relative humidity.
6. Explain Food preservation methods.
7. Explain Sterilization techniques.
8. Discuss Microbial standards for food safety.

III. Short answers on: **(10 x 3 = 30)**

1. Define Normal flora.
2. Define Spores.
3. Define Bacterial growth.
4. Disadvantages of Canned food.
5. Diseases caused by Protozoa.
6. Write any three beneficial bacteria.
7. What is mean by immune resistance?
8. Define Food groups.
9. What is food poisoning?
10. Soil borne diseases.

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