

[LD 1013]

OCTOBER 2013

Sub. Code: 1303

M.Sc. CLINICAL NUTRITION DEGREE EXAMINATION

FIRST YEAR

PAPER III – MEDICAL AND FOOD MICROBIOLOGY

Q.P. Code: 281303

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. Methods of Control and destruction of Microorganisms from foods
2. Environmental contaminants and their types.

II. Write notes on:

(10 x 6 = 60)

1. Concepts of Food Microbiology.
2. Prions.
3. Factors responsible for spoilage of foods.
4. Sources of food contamination.
5. What is food poisoning? Explain with two examples.
6. Any two Naturally occurring toxicants.
7. What is food adulteration? Explain briefly the common adulterants used in food industry.
8. Risk assessment.
9. HACCP – an effective food safety assurance step - Discuss.
10. International organizations and agreements in the area of food standardization.

[LF 1014]

OCTOBER 2014

Sub. Code: 1303

M.Sc. CLINICAL NUTRITION DEGREE EXAMINATION

FIRST YEAR

PAPER III – MEDICAL AND FOOD MICROBIOLOGY

Q.P. Code: 281303

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. Factors affecting food safety.
2. Any four food borne infections caused by bacteria.

II. Write notes on:

(10 x 6 = 60)

1. Fermented dairy products.
2. Prions.
3. Sources of food contamination.
4. Spoilage of meat and meat products.
5. Botulism.
6. Methods for the prevention of adulteration.
7. Naturally occurring toxicants.
8. Control and destruction of microorganisms in foods.
9. Guidelines for the application of HACCP principles.
10. Compulsory national legislation for food safety.

[LH 0415]

OCTOBER 2015

Sub. Code: 1303

M.Sc., CLINICAL NUTRITION
(from 2012-2014 onwards)
FIRST YEAR
PAPER III – MEDICAL & FOOD MICROBIOLOGY

Q.P. Code : 281303

Time : Three hours

Maximum : 100 marks

I. Elaborate on :

(2 x 20 = 40)

1. Sources, types and influence of microorganisms in foods
2. Reporting and investigations of food borne diseases.

II. Write notes on:

(10 x 6 = 60)

1. Economically important fermentation products
2. Prions
3. Pasteurization
4. Chemical changes due to spoilage
5. Botulism
6. Classification of adulterants
7. Roles of ISO in food safety
8. Factors responsible for food spoilage
9. General principles of risk communication
10. HACCP plan for any one food product.

[LJ 1016]

OCTOBER 2016

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION EXAMS
FIRST YEAR
PAPER III – MEDICAL AND FOOD MICROBIOLOGY**

Q.P. Code : 281303

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Factors affecting growth of microorganisms in foods.
2. Influence of environmental contaminants in foods.

II. Write notes on:

(10 x 6 = 60)

1. Spoilage of poultry products.
2. Genetically modified foods.
3. Chemical changes occurs in foods due to spoilage.
4. Mold contamination in foods.
5. Food borne diseases due to naturally occurring toxicants.
6. Toxicants in animal foods.
7. Common adulterants.
8. How the biological hazards will be identified and characterized?
9. HACCP principles.
10. Quality control and Inspection Act 1963.

[LK 0517]

MAY 2017

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION EXAMS
FIRST YEAR
PAPER III – MEDICAL AND FOOD MICROBIOLOGY**

Q.P. Code : 281303

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Write the principle, procedure and interpretation of MBRT test with diagrams.
2. a) Name starter culture used in curd preparation. Write the flow chart to ferment milk for curd preparation.
b) Write about economically important fermentation products.

II. Write notes on:

(10 x 6 = 60)

1. Write short notes on:-
a) Spoilage of bread b) Food poisoning of clostridium botulinum
2. Define: a) Asepsis b) Skimmed milk
3. Describe Brucella Ring test for microbial analysis of milk.
4. Describe salmonella food infection with respect to sources and prevention.
5. Explain Spoilage and Preservation of
a) Milk and milk products b) Sea foods
6. What are preservatives? Explain the use of any 5 chemical preservatives in food microbiology.
7. Write in detail about genetically modified foods.
8. Write in detail about Mycotoxins.
9. Name the food borne diseases due to naturally occurring toxicants. Explain Lathyrism.
10. Write about factors affecting food safety.

[LL 1017]

OCTOBER 2017

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION EXAMS
FIRST YEAR
PAPER III – MEDICAL AND FOOD MICROBIOLOGY**

Q.P. Code : 281303

Time : Three hours

Maximum : 100 Marks

I. Elaborate on: **(2 x 20 = 40)**

1. Factors affecting growth of microorganisms in foods.
2. Food borne diseases due to naturally occurring toxicants. Justify.

II. Write notes on: **(10 x 6 = 60)**

1. Gene modification and its influence on foods.
2. Mycotoxins and their effects on human health.
3. Chemical methods of destruction of microorganisms.
4. Salmonellosis – Explain the disease, foods involved, conditions necessary for outbreak and its Control.
5. What are the effects of spoilage caused in fruits and vegetables by fungi?
6. Bacterial pathogens causing gastroenteritis in human. Explain.
7. Tabulate few adulterants in foods, method of detection and the ill effects caused in human.
8. Define risk communication. What are the roles and responsibilities of risk communication?
9. Explain why HACCP as a better and effective method over traditional food safety assurance program?
10. Explain the roles of:
 - i) Bureau of Indian standards Act (BIS)1986.
 - ii) Consumer protection Act (CPA) 1986.

[LN 1018]

OCTOBER 2018

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION EXAMS
FIRST YEAR
PAPER III – MEDICAL AND FOOD MICROBIOLOGY**

Q.P. Code : 281303

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Role of Microorganisms in Fermented Food.
2. Types of Food Borne diseases and intoxications.

II. Write notes on:

(10 x 6 = 60)

1. Write a note on naturally Occurring Toxicants.
2. Classification of Adulterants.
3. Risk Assessment of Biological Hazard.
4. Benefits of HACCP.
5. Food Standards and Regulations in India.
6. Principle of Risk Communication.
7. Anti-Nutritional Factors in Foods.
8. Spoilage of Milk and Milk Products.
9. Factors affecting the growth of Microorganisms.
10. Concerns of Genetically Modified Foods.

[LP 1019]

OCTOBER 2019

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION EXAMS
FIRST YEAR
PAPER III – MEDICAL AND FOOD MICROBIOLOGY**

Q.P. Code : 281303

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Sources, types and influence of microorganisms in foods.
2. Reporting and investigations of food borne diseases.

II. Write notes on:

(10 x 6 = 60)

1. Economically important fermentation products.
2. Prions.
3. Pasteurization.
4. Chemical changes due to spoilage.
5. Botulism.
6. Classification of adulterants.
7. Roles of ISO in food safety.
8. Factors responsible for food spoilage.
9. General principles of risk communication.
10. HACCP plan for any one food product.

[LQ 1019]

NOVEMBER 2020
(MAY 2020 SESSION)

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION EXAMS
FIRST YEAR
PAPER III – MEDICAL AND FOOD MICROBIOLOGY**

Q.P. Code : 281303

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Factors affecting food safety.
2. Any four food borne infections caused by bacteria.

II. Write notes on:

(10 x 6 = 60)

1. Fermented dairy products.
2. Salmonellosis.
3. Sources of food contamination.
4. Spoilage of meat and meat products.
5. Botulism.
6. Methods for the prevention of adulteration.
7. Naturally occurring toxicants.
8. Control and destruction of microorganisms in foods.
9. Guidelines for the application of HACCP principles.
10. Compulsory national legislation for food safety.

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

[AHS 0321]

MARCH 2021

Sub. Code: 1303

(OCTOBER 2020 EXAM SESSION)

M.Sc. CLINICAL NUTRITION

FIRST YEAR (From 2012-2014 onwards)

PAPER III – MEDICAL AND FOOD MICROBIOLOGY

Q.P. Code : 281303

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Need, Benefit, Principle and guidelines for HACCP.
2. Food borne diseases and explanation types of food borne disease.

II. Write notes on:

(10 x 6 = 60)

1. What are Priyons and name disease caused by Priyons.
2. Factors responsible for food spoilage.
3. Sources of contamination.
4. Standardization and quality control.
5. Risk management and communication.
6. Different physical method preservation.
7. Fermented - baked preparation.
8. Explain temperature and moisture affecting growth of microorganism.
9. Harmful effects of adulterants.
10. Microorganism in food.

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

[AHS 0921]

**SEPTEMBER 2021
(MAY 2021 EXAM SESSION)**

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION
FIRST YEAR (From 2012-2014 onwards)
PAPER III – MEDICAL AND FOOD MICROBIOLOGY
*Q.P. Code : 281303***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Factors responsible for food spoilage – Meat, Fish, Milk and milk products.
2. List and explain the factors affecting the growth of microorganism.

II. Write notes on:

(10 x 6 = 60)

1. Fermented dairy products.
2. Health related concerns of GM food.
3. Anti Nutritive factors in food.
4. Prevention and Food Adulteration Act 1954.
5. Physical methods of Food preservation.
6. Principle of HACCP.
7. Concern of Dioxin-contaminated food.
8. Microorganism in Food.
9. Write notes on food borne infection.
10. Risk analysis: the new paradigm in food safety assurance.

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

[AHS 0222]

**FEBRUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 1303

**M.Sc. CLINICAL NUTRITION
FIRST YEAR**

(Candidates admitted from 2012-2014 onwards - Paper III)

(Candidates admitted from 2020-2021 onwards - Paper IV)

PAPER III & IV – MEDICAL AND FOOD MICROBIOLOGY

Q.P. Code : 281303

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Role of micro organism in Fermented food -Baked preparation, vegetarian foods, dairy products.
2. List and explain in detail the factors affecting food safety.

II. Write notes on:

(10 x 6 = 60)

1. Food standardization and regulation in India.
2. Food adulterants and common adulteration.
3. Risk assessment
4. Chemical methods of food preservation
5. Food contamination
6. Nutrition and oxygen affecting the growth of microorganism
7. Concerns of genetically modified foods
8. Write a note on food borne toxic infection
9. Benefits of HACCP
10. Food borne diseases due to naturally occurring toxicants
