



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
(A DEEMED TO BE UNIVERSITY)

Integrated B.Sc.-M.Sc. Clinical Nutrition and Dietetics (CND)

Fourth Year Semester- VII March 2023 Examination

Time- 2 Hrs

[Max Marks: 60]

FOOD TOXICOLOGY

QP Code: N7200

*Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary*

LONG ESSAY

2x10= 20 Marks

1. Define Favism. Explain the cyanogenic glycosides and vasoactive amines linkage to foodborne toxicants
2. Explain the effects of naturally occurring toxicants for living organisms

SHORT ESSAY

5x5=25 Marks

3. Explain the current food uses of food irradiation
4. Describe the biological determinants of toxicants
5. Describe the relevance of replication, transcription and translation to teratogenesis
6. Explain the Toxicity, Dose, and Response
7. Discuss the role phase-I reactions in biotransformation

SHORT ANSWER

5x3=15 Marks

8. What are maillard reactions?
9. Mention the enzymes of phase-II reactions
10. Define food contaminants. Give an examples
11. What is Chronic intoxication
12. Expand NOEL, NOAEL and BMD

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FUNCTIONAL FOODS AND NUTRACEUTICALS

QP Code: N7220

*Your answers should be specific to the question asked
Draw neat labelled diagrams wherever necessary*

LONG ESSAY

2×10=20 Marks

1. Give in detail the classification of nutraceuticals based on plant and animal sources.
2. Write about the natural pigments and state its health benefits.

SHORT ESSAY

5×5=25 Marks

- 3 Define health claims. Classify health claims based on the level of scientific evidence
4. Write a short note on nutraceuticals from cereal product.
5. Explain briefly the functions of carotenoids and give its biological functions
6. Highlight a brief overview about functional food product in Indian market
7. Write short notes on plant made pharmaceuticals.

SHORT ANSWER

5×3=15 Marks

8. Mention the bioactive components present in Indian spices
9. Write a note on Garlic and Fish oil as healthy food.
10. Write a note on functional foods
11. Write a note on nutrigenomics
12. List the health benefits of prebiotics

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[Max Marks: 50]

NUTRITIONAL GENOMICS

QP Code: N7230

Your answer should be specific to the question asked

Draw neat labeled diagrams wherever necessary

LONG ESSAY

2 x 6 = 12 Marks

1. Define Nuclear receptor. Draw its structure and elaborate its mechanism of action.
2. Define gene environment interaction. Explain the factors influencing gene environment interactions

SHORT ESSAY

6 x 4 = 24 Marks

3. Differentiate purines and pyrimidines with their structures
4. Explain the role of NAD/NADH ratio in aging and human diseases
5. List fat soluble vitamins and enumerate their functions
6. Explain the role of epigenetic machinery in diet induced hepato carcinogenesis
7. Brief note on Examples of Buffering
8. Explain epigenetic effects related to reproduction in humans

SHORT ANSWERS

7 x 2 = 14 Marks

9. Define Homozygous and Heterozygous
10. Define DNA methylation and imprinting
11. Name some polyphenols incorporated in diet
12. List examples of metabolites
13. Define cancer and list its types
14. Define Epistasis and Epigenetics
15. Note on LDL subclasses

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Max Marks: 50

FOOD MICROBIOLOGY

QP Code: N 7240

*Your answers should be specific to the question asked
Draw neat labelled diagrams wherever necessary*

LONG ESSAY

2×6=12 Marks

1. Explain the principle behind high temperature preservation
2. Explain in detail the various interactions between food –spoiling bacteria

SHORT ESSAY

6×4=24 Marks

3. Explain the effect of drying on microbes
4. Give a brief account of foods currently being irradiated
5. Discuss in detail about bacteriocins and their use as food preservatives
6. Discuss meat spoilage under anaerobic conditions
7. Explain the rapid methods used for the detection of specific organisms
8. Explain the factors that influence microbial growth within food

SHORT ANSWER

7×2=14 Marks

9. List the non thermal methods of food preservation
10. Pressure Injury
11. Biopreservation
12. Parabens
13. Specific spoilage organism
14. DFD Meat
15. List the causes of food borne infections

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