

G-3/349/22

Roll No.

III Semester Examination, January 2022

M.Sc.

BIOCHEMISTRY

Paper III

(Nutritional and Environmental Biochemistry)

Time : 3 Hours]

[Max. Marks : 80

Note : *All questions are compulsory. Question Paper comprises of 3 Sections. Section A is objective type/multiple choice questions with no internal choice. Section B is short answer type with internal choice. Section C is long answer type with internal choice.*

SECTION A

1×8=8

(Objective Type/Multiple Choice Questions)

Choose the correct answer :

1. Which stage does adulteration take place in ?
(a) Producer (b) Distributor
(c) Retailer (d) All of these
2. On average, obese people have a higher basal metabolic rate (BMR) than lean people, mainly because the body of the obese has more (in kg) :
(a) Fat mass (b) Lean mass
(c) Sugar (d) All of these

P.T.O.

3. The problems related to nutrition of nutrients is called :
- Malnutrition
 - Insolubility of nutrition
 - Hyper uptake of nutrition
 - None of the above
4. What is the worldwide prevalence of obesity ?
- 11%
 - 13%
 - 15%
 - 39%
5. Eco-toxicology is the study of :
- Chemical interactions of organism and environment
 - Physical interactions of organism and environment
 - Thermal interactions of organism and environment
 - None of the above
6. What are Xenobiotics ?
- Another form of antibiotics
 - A form of nutrient
 - Nutrients which kill the gut harmful microbes
 - Anything that is not nutrients and enters the body through different routes

7. A food additive is considered to be safe when :
- No evidence of human toxicity has been observed over the period of its use
 - Estimated Daily Intake (EDI) from its presence in food is less than its ADI
 - Its toxic effects are observed only at doses 100x the EDI
 - None of the above
8. Heavy metals, counted as mercury, Lead, chromium and :
- Carbon
 - Arsenic
 - Oxygen
 - None of these

SECTION B**6×4=24****(Short Answer Type Questions)**

Note : *Answer the following questions in 250 words.*

Unit-I

1. Write a short note on any *one* :
- Food adulterations and precautions
 - Basal metabolic rate (BMR)

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Unit-II

2. Write a short note on any *one* :
- (i) Nutritional aspects of minerals
 - (ii) Malnutrition

Unit-III

3. Write a short note on any *one* :
- (i) Soil pollution
 - (ii) Phase II reaction

Unit-IV

4. Write a short note on any *one* :
- (i) Cadmium toxicity
 - (ii) Toxicity testing

SECTION C

12×4=48

(Long Answer Type Questions)

Note : Answer the following questions in 500 words.

Unit-I

1. Describe the composition of balanced vegetarian and non-vegetarian diets in detail.

Or

Write an essay on food processing methods; explaining the loss of nutrients during processing and cooking.

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Unit-II

2. Describe the nutritive value of carbohydrates and proteins.

Or

Explain disorders related to nutrition.

Unit-III

3. Write an elaborative note on ecotoxicology and explain its environmental significance.

Or

Describe environmental pollution in detail.

Unit-IV

4. Describe pesticide toxicity in detail.

Or

Describe Occupational toxicology in detail.

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