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**SECTION 'C'**

**12×4=48**

*(Long Answer Type Questions)*

**Note :** Answer the following questions in 500 words.

1. Describe the recommended dietary allowance for different categories of the human beings.

Or

Write an essay on Basal metabolism and methods of measuring basal metabolic rate.

2. Describe Nutritional aspects of the vitamins and minerals.

Or

Write an essay on protein energy malnutrition.

3. Describe environmental pollution.

Or

Write an essay on Xenobiotic metabolism.

4. Describe Toxicology of food additives.

Or

Write an essay on Genetic toxicity testing.

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Roll No.....

**M.Sc. III Semester Examination, April-2021**

**BIOCHEMISTRY**

**Paper III**

*(Nutritional and Environmental Biochemistry)*

Time : 3 Hours ]

[Maximum 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**

*(Multiple Type Questions)*

*Choose the correct answer :*

1. Which of the following components are major nutrients in our food ?
- (a) Carbohydrates (b) Lipids and Proteins
- (c) Vitamins and Minerals (d) All of the above
2. Which of the following food components is required for the growth and maintenance of the human body ?
- (a) Proteins (b) Vitamins

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- (c) Minerals (d) Both (a) and (b)
3. All the following are important electrolytes in the body except :
- (a) Potassium ions (b) Carbon ions  
(c) Chloride ions (d) Sodium ions
4. Three of the following minerals and vitamins may be involved in anaemia of one type or another, which one is not ?
- (a) Vitamin C (b) Calcium  
(c) Vitamin B12 (d) Iron.
5. A toxic substance produces by biological system is specially referred to as a :
- (a) Toxicant (b) Toxin  
(c) Xenobiotic (d) Poison
6. Which of the following is characteristic of a non-genotoxic carcinogen ?
- (a) has no influence on the promotional stage of carcinogenesis,  
(b) would be expected to produce positive responses in *in vitro* assays for mutagenic potential  
(c) typically exerts other forms of toxicity and/or disrupts cellular homeostasis  
(d) generally shows little structural diversity

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7. The most common target organ of toxicity is the :
- (a) Heart (b) Lung  
(c) CNS (brain and spinal cord) (d) Skin
8. Hazard communication in OSHA conducts :
- (a) Chemical analysis (b) Toxic exposure  
(c) Strength analysis  
(d) Hazard evaluations of the products

*SECTION 'B'*

**4×6=24**

*(Short Answer Type Questions)*

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

1. Write short note on any one :
- (i) Balanced vegetarian and non-vegetarian diets,  
(ii) Government regulation on preservation and quality of food.
2. Write short note on any one :
- (i) Nutritional aspects of the lipids,  
(ii) Starvation and Obesity.
3. Write short note on any one :
- (i) Outdoor Air pollution,  
(ii) Hydrolysis and Hydration.
4. Write short note on any one :
- (i) Herbicides and biopesticides,  
(ii) Occupational hazards.

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P. T. O.