

2022

M.Sc.

2nd Semester Examination

HUMAN PHYSIOLOGY

PAPER—PHY-201

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

**UNIT-201.1 COMMUNITY HEALTH : HEALTH,
DISEASE AND NUTRITION**

Group-A

Answer any *two* questions. 2×2

1. What are non-communicable diseases? Name four leading non communicable diseases. 1+1

(Turn Over)

2. Briefly mention the etiology of dental carries. 2
3. What is meant by vertical transmission of a disease? 2
4. Mention the signs and symptoms of anorexia nervosa. 1+1

Group-B

Answer any *two* questions. 2×4

5. Differentiate between benign and malignant tumors. What is metastasis? 2+2
6. Describe the mechanism of acute response due to food allergy. What are the symptoms of cow's milk protein allergy? 3+1
7. Describe web of causation. 4
8. State the possible causes of infant diarrhoea. Prescribe the diet plan of a baby suffering from diarrhea. 2+2

Group-C

Answer any *one* question. 1×8

9. Define population genetics. How would you calcu-

late the frequency of each allele and each genotype in a population of N diploid individuals carrying X_1 , X_2 and X_3 alleles for a particular trait? Write down the Hardy-Weinberg Principle. 2+5+1

10. Write in brief the physiological changes of pregnancy. How maternal age is important to carry out the pregnancy? 5+3

**UNIT-201.2 COMMUNITY HEALTH : ENVIRONMENTAL POLLUTION,
TOXICOLOGY AND MANAGEMENT**

Group-A

Answer any *two* questions. 2×2

1. What is 'Predation'? 2
2. What is known as 'food web'? 2
3. Mention two main effects of organic mercury toxicity. 1+1
4. What is biosphere reserve? 2

Group-B

Answer any *two* questions. 2×4

5. Discuss how the abiotic factors influence on species survival. 4
6. Discuss the pathophysiology of CO poisoning. 4
7. Mention the direct and indirect actions of ionizing radiation. 2+2
8. Describe briefly about the leachate collection system of a land-fill. What is vermi-composting? 3+1

Group-C

Answer any *one* question. 1×8

9. Describe the mechanism of phase I biotransformation reaction. Write a note on 'cytochrome P₄₅₀ enzyme'. 4+4
10. Describe the in-situ and ex-situ measures for conservation of biodiversity. What are the threats to biodiversity? Mention two advantages of solar energy. 4+3+1

[*Internal Assessment – 10 Marks*]