2022

3rd Semester Examination

NUTRITION (Honours)

Paper : SEC 1-T

[CBCS]

Full Marks : 40 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

[Immunology, Toxicology and Public Health]

Group - A

A. Answer any ***five*** questions : 2×5=10

1. What is the role of IgA in immunity?
2. What are macrophages?
3. What is meant by passive immunization?
4. What do you mean by hapten?
5. Define BOD.
6. What are the components of cell mediated immunity?
7. What do you mean by biomagnification?
8. What is organochlorine pesticide?

P.T.O.

Group - B

B. Answer any ***four*** questions : 5×4=20

9. Discuss about the role of Igs in discrimination of acute and chronic infection.

10. Write the adverse effect of pesticide residues on the environment.

11. Short note : Herd immunity.

12. Differentiate between T_C and T_H cells.

13. Write about the chronic mercury toxicity.

14. How does organochlorine compounds causes reproductive dysfunction?

Group - C

C. Answer any ***one*** question : 10×1=10

15. Define bioaccumulation. What do you mean by xenobiotics? How does xenobiotic substances are excreted from our body? 2+2+6

16. State the mechanism of action and adverse effects of arsenic in man. Discuss about the phases of humoral immunity. 5+5

OR

[Biostatistics and Bioinformatics]

Group - A

A. Answer any ***five*** questions : 2×5=10

1. What is the use of chi-square test?
2. Define the term inter-quartile range.
3. What is coefficient of variance?
4. What do you mean by non-parametric test?
5. Write any two merits of median.
6. Differentiate between population and sample.
7. Write down the uses Protein Data Bank.
8. What is Phylograms?

Group - B

B. Answer any ***four*** questions : 5×4=20

9. Compute the SD of the following memory test scores of 20 high school students : 9, 10, 12, 15, 9, 11, 16, 10, 13, 9, 12, 10, 14, 13, 15, 16, 13, 10, 12, 14.
10. What is genomics? Briefly discuss about the nucleotide and genome sequence databases. 2+3
11. Write a short note on measures of central tendency.

P.T.O.

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12. What is the significance of phylogenetic tree analysis?

13. What is human genome project? Briefly discuss about the role of bioinformatics tools in completion of the project. 2+3

14. What is 'FASTA' sequence? What are applications of NCBI BLAST? 2+3

Group - C

C. Answer any ***one*** question : 10×1=10

15. Attack rates among the vaccinated and unvaccinated against the COVID-19 are given in the following table below. Prove the protectiveness of the vaccine by the appropriate test.

Group	Attacked	Not Attacked	Total
Vaccinated	10	90	100
Un Vaccinated	26	74	100
Total	36	164	200

Critical χ^2 values (df – 1) for df–1 $\chi^2_{0.05} = 3.84$, $\chi^2_{0.01} = 6.65$, $\chi^2_{0.001} = 10.83$ 10

16. Differentiate between primary and secondary data. Explain with a suitable examples of each data. 4+6
