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M.SC. IN NUTRITION & FOOD SCIENCE
EXAMINATION : DECEMBER-2023
SECOND SEMESTER

Sub. : Microbiology & Research Methodology (M.Sc. CB-213)

Date: 07/12/2023

Total marks: 60

Time: 2.00 pm to 4.30 pm

Instructions: 1) All questions are compulsory. 2) Figures to the right indicate full marks.

SECTION A

Q. 1 Select the correct alternative. (5)

- 1) Yeast is used in the production of _____.
 - a) Tetracycline
 - b) Butanol
 - c) Ethanol
 - d) Citric Acid
- 2) _____ type of bacteria is responsible for the cause of Cholera.
 - a) Rod shaped
 - b) Spiral shaped
 - c) Spherical shaped
 - d) Coma shaped
- 3) _____ color indicates the presence of gram positive bacteria.
 - a) Dark blue
 - b) Dark red
 - c) Dark brown
 - d) Crystal violet
- 4) Peptidoglycan layer is composed of _____.
 - a) Polysaccharides
 - b) Amino acids
 - c) Lipids
 - d) Both (a) and (b)
- 5) During processing, foods can get contaminated by _____.
 - a) Workers
 - b) Equipments
 - c) Packaging materials
 - d) All of the above

Q. 2 Answer the following questions. (Any One) (15)

- 1) What are food additives? Explain its types, sources and applications in food industries.
- 2) Explain growth curve and methods for destruction of microorganisms.

Q. 3 Write a short note on (Any Two) (10)

- 1) Write a note on Class I and Class II preservatives
- 2) Flow chart of methods in food preservation
- 3) Classification of foods on the basis of shelf-life

SECTION B

Q. 1 Multiple Choice Questions

(5)

- 1) Pure research is also known as _____.
 - a) Basic research
 - b) Fundamental research
 - c) Theoretical research
 - d) All the above
- 2) _____ comes under graphical type of presentation of data.
 - a) Histogram
 - b) Ogive
 - c) Frequency polygon
 - d) All the above
- 3) Two dimensional diagram are _____.
 - a) Rectangles
 - b) Squares
 - c) Pie-diagram
 - d) All the above
- 4) Measures of central tendency is _____.
 - a) Sum
 - b) Mean
 - c) Pie-diagram
 - d) None of the above
- 5) Alternative hypothesis is expressed as _____.
 - a) H_0
 - b) H_a
 - c) H_n
 - d) None of the above

Q. 2 Answer the following questions. (Any One)

(15)

- 1) Define data. Write in detail about presentation of data.
- 2) Definition of research. Write about research in Sanskrit and types of research in detail.

Q. 3 Write a short note on (Any Two)

(10)

- 1) Qualitative data and quantitative data.
 - 2) Write about measures of central tendency.
 - 3) Define sample and write about sampling methods.
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