

Total Marks : 100

Time : 10.00 am to 12.00 noon

- 1) All questions are compulsory.
- 2) Each question carries 2 marks.

- 1 : 13

4. Which of the following is true about a hypothesis?
 - A) It can only be tested through experiments
 - B) It is always proven to be true
 - C) It provides a tentative explanation for a phenomenon
 - D) It is the same as a theory
5. A case study is an example of which type of research design?
 - A) Experimental design
 - B) Correlational design
 - C) Qualitative design
 - D) Quantitative design
6. A research design that examines the relationship between two or more variables without manipulating them is called:
 - A) Experimental design
 - B) Correlational design
 - C) Descriptive design
 - D) Qualitative design
7. Which of the following qualities is most essential for a good researcher?
 - A) Personal bias
 - B) Curiosity and skepticism
 - C) Quick conclusions
 - D) Fixed mindset

8. A train travels 60 km in 1 hour. How much distance will it cover in 4 hours?
- A) 120 km
 - B) 180 km.
 - C) 240 km
 - D) 300 km
9. Which of the following practices is considered plagiarism?
- A) Paraphrasing without credit
 - B) Using your own original data
 - C) Reviewing others' work in your literature review
 - D) Citing all sources
10. If all roses are flowers, and some flowers fade quickly, which of the following is true?
- A) All roses fade quickly
 - B) No rose fades quickly
 - C) Some roses fade quickly
 - D) None of the roses fade quickly
11. What is one of the primary reasons plagiarism is considered unethical?
- A) It improves the quality of research
 - B) It helps researchers gain popularity
 - C) It misrepresents authorship and disrespects the original creator
 - D) It saves time for researchers

12. Plagiarism can best be avoided by
- A) Paraphrasing without giving credit
 - B) Citing all sources accurately
 - C) Using the work of others without changes
 - D) Copying directly without permission.
13. Which of the following best defines a variable?
- A) A fixed measurement in an experiment
 - B) Any characteristic or factor that can vary or change
 - C) A dependent factor in every experiment
 - D) A tool for controlling extraneous factors
14. What is an extraneous variable?
- A) A variable that directly affects the outcome
 - B) A variable that is manipulated by the researcher
 - C) A variable that can influence the dependent variable if not controlled
 - D) A variable that measures the experiment's outcome
15. Which of the following is a primary advantage of factorial design?
- A) It allows researchers to study the effects of only one variable
 - B) It reduces the need for sample randomization
 - C) It permits the examination of interaction effects between variables.
 - D) It simplifies the experimental process significantly

16. Which of these methods can be used to control extraneous variables?
- A) Random assignment
 - B) Adding more dependent variables
 - C) Only using large sample sizes
 - D) Ignoring these variables
17. In research, the "universe" refers to:
- A) The total number of samples in an experiment
 - B) A sample selected for an experiment
 - C) The entire group from which a sample may be drawn
 - D) The group of participants who respond similarly in a study
18. When a sample accurately reflects the characteristics of the population, it is called a:
- A) Random sample
 - B) Representative sample
 - C) Stratified sample
 - D) Biased sample
19. Which sampling technique ensures that every member of the population has an equal chance of being selected?
- A) Stratified sampling
 - B) Cluster sampling
 - C) Simple random sampling
 - D) Quota sampling

20. A Likert Scale is commonly used in which type of data collection tool?
- A) Questionnaire
 - B) Checklist
 - C) Inventory
 - D) Rating Scale
21. Which type of interview involves asking open-ended questions without a predefined sequence?
- A) Structured Interview
 - B) Unstructured Interview
 - C) Semi-structured Interview
 - D) Closed Interview
22. What does the term "validity" refer to in testing?
- A) Consistency of measurement
 - B) Accuracy of measuring what it is intended to measure
 - C) The ease with which a test can be scored
 - D) Stability over time
23. When a test accurately predicts an outcome, it is said to have high
- A) Predictive validity
 - B) Content validity
 - C) Construct validity
 - D) Internal validity

24. If a measure is reliable, it means that it is:
- A) Accurate
 - B) Free from error
 - C) Consistent in its results
 - D) All of the above
25. Which of the following types of questions is typically found in a questionnaire?
- A) Closed-ended
 - B) Open-ended
 - C) Multiple-choice
 - D) All of the above
26. What is the primary reason for food spoilage in stored meat products?
- A) Oxidation
 - B) Carbohydrate fermentation
 - C) Microbial growth
 - D) Maillard reaction
27. Which of the following compounds is responsible for the pungent flavor in garlic?
- A) Capsaicin
 - B) Allyl isothiocyanate
 - C) Allicin
 - D) Vanillin

28. What type of bond holds amino acids together in a protein structure?
- A) Hydrogen bond
 - B) Peptide bond
 - C) Ionic bond
 - D) Covalent bond
29. Which food processing technique involves heating at a high temperature to kill microorganisms and extend shelf life?
- A) Fermentation
 - B) Blanching
 - C) Pasteurization
 - D) Pickling
30. Which of the following microbes is commonly used in bread production?
- A) *Aspergillus niger*
 - B) *Lactobacillus acidophilus*
 - C) *Saccharomyces cerevisiae*
 - D) *Penicillium notatum*
31. Which of the following is a common indicator organism used to assess water quality?
- A) *Staphylococcus aureus*
 - B) *Escherichia coli*
 - C) *Clostridium botulinum*
 - D) *Lactobacillus acidophilus*

32. Which microorganism is typically associated with the production of aflatoxins in food?
- A) *Aspergillus flavus*
 - B) *Saccharomyces cerevisiae*
 - C) *Lactobacillus bulgaricus*
 - D) *Penicillium roqueforti*
33. Which group of microorganisms is responsible for nitrogen fixation in plants?
- A) Algae
 - B) Viruses
 - C) Cyanobacteria
 - D) Fungi
34. Blanching is typically done before freezing vegetables to:
- A) Destroy enzymes
 - B) Remove moisture
 - C) Add color
 - D) Reduce acidity
35. Which of the following fruits are best preserved through freezing?
- A) Apples
 - B) Bananas
 - C) Strawberries
 - D) Citrus fruits

36. Which gas is commonly used in modified atmosphere packaging for fruits?
- A) Oxygen
 - B) Nitrogen
 - C) Carbon monoxide
 - D) Helium
37. Which enzyme is commonly used in the malting process of cereals?
- A) Protease
 - B) Amylase
 - C) Lipase
 - D) Cellulase
38. Legume soaking before cooking primarily serves to:
- A) Increase flavor
 - B) Remove anti-nutritional factors
 - C) Improve texture
 - D) Reduce protein content
39. In cereal processing, parboiling is primarily associated with which of the following grains?
- A) Wheat
 - B) Oats
 - C) Rice
 - D) Barley

40. In solvent extraction, which solvent is most widely used to extract oil from oilseeds?
- A) Ethanol
 - B) Hexane
 - C) Acetone
 - D) Methanol
41. The refining process that removes free fatty acids (FFAs) from crude oil is called:
- A) Degumming
 - B) Deodorization
 - C) Neutralization
 - D) Winterization
42. What is the role of hydrogenation in oil processing?
- A) To increase the oil's unsaturation level
 - B) To convert liquid oils into solid fats
 - C) To remove impurities
 - D) To reduce oil viscosity
43. Which process is used to prevent cream from rising to the top in milk?
- A) Homogenization
 - B) Sterilization
 - C) Fermentation
 - D) Fortification

44. Which milk product is made by fermenting milk with specific bacterial cultures?
- A) Butter
 - B) Yogurt
 - C) Cream
 - D) Whey
45. What is a common sign of spoilage in meat products?
- A) Change in texture
 - B) Off-odor
 - C) Change in color
 - D) All of the above
46. What is the main concern regarding the use of antibiotics in poultry processing?
- A) Increased yield
 - B) Resistance in pathogens
 - C) Flavor changes
 - D) Nutritional value
47. Which is a critical control point in poultry processing?
- A) Cutting
 - B) Cooking
 - C) Packing
 - D) All of the above.

48. What does FSMS stand for?
- A) Food Safety Monitoring System
 - B) Food Standards Management System
 - C) Food Safety Management System
 - D) Food Surveillance and Monitoring System
49. In FSMS, what is the purpose of monitoring critical control points (CCPs)?
- A) To improve taste of the product
 - B) To ensure that hazards are controlled within set limits
 - C) To reduce overall production time
 - D) To increase product pricing
50. Which of the following materials is commonly used in biodegradable packaging?
- A) Polystyrene
 - B) PLA (Polylactic Acid)
 - C) PVC (Polyvinyl Chloride)
 - D) Polycarbonate

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