

**B.Sc. BIOTECHNOLOGY(HONOURS)
SEVENTH SEMESTER
RESEARCH METHODOLOGY
BBT-701**

**SET
A**

[USE OMR FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

Choose the correct answer from the following:

1X20=20

1. Which of the following research methods is most appropriate for understanding the lived experiences of participants?
 - a. Experimental
 - b. Survey
 - c. Qualitative
 - d. Quantitative
2. Which of the following methods primarily uses numerical data to draw conclusions?
 - a. Experimental
 - b. Ethnography
 - c. Narrative
 - d. Historical
3. What does a correlational study primarily investigate?
 - a. Cause and effect relationship
 - b. Deep understanding of a single event
 - c. Relationship between two or more variables
 - d. Historical progression of an event
4. In an experimental design, what term is used for the variable that is manipulated by the researcher?
 - a. Control variable
 - b. Dependent variable
 - c. Independent variable
 - d. Confounding variable
5. Research that uses qualitative methods for one phase and quantitative methods for the next phase is known as:
 - a. Action research
 - b. Mixed-method research
 - c. Quantitative research
 - d. Pragmatic research
6. Why do you need to review the existing literature?
 - To give your dissertation a proper
 - a. academic appearance with lots of references
 - b. Because without it, you could never reach the required word count
 - To find out what is already known
 - c. about your area of interest
 - d. To help in your general study
7. Writing a literature review requires:
 - a. Planning
 - b. Concepts
 - c. Good writing skill
 - d. All of these

8. Research is
 - a. Lab Experiment
 - b. Procedure
 - c. Report
 - d. Systematic inquiry
9. Which section of a research report presents the theoretical rationale for the research?
 - a. Introduction
 - b. Review & Literature
 - c. Methods
 - d. Results
10. Which of the following scientific report is most important for innovation
 - a. Book chapters
 - b. Books
 - c. Reviews
 - d. Research Articles
11. Which of the following scientific report need lab experiment
 - a. Research articles
 - b. Review articles
 - c. Books
 - d. None of these
12. If $x_1, x_2, x_3, \dots, x_n$ are the observations of a given data. Then the mean of the observations will be
 - a. Sum of observations/Total number of observations
 - b. Total number of observations/Sum of observations
 - c. Sum of observations + Total number of observations
 - d. None of these
13. If the mean of frequency distribution is 7.5 and $\sum f_i x_i = 120 + 3k$, $\sum f_i = 30$, then k is equal to
 - a. 35
 - b. 25
 - c. 30
 - d. 33
14. The mean of the data: 4, 10, 5, 9, 12 is
 - a. 8
 - b. 12
 - c. 7
 - d. 6
15. The class interval of a given observation is 10 to 15, then the class mark for this interval will be
 - a. 11.5
 - b. 12.5
 - c. 13.5
 - d. None of these
16. While computing mean of grouped data, we assume that the frequencies are
 - a. centered at the class marks of the classes
 - b. evenly distributed over all the classes
 - c. centered at the upper limits of the classes
 - d. centered at the lower limits of the classes
17. The method used to find the mean of a given data is(are)
 - a. Direct method
 - b. Assuming mean method
 - c. Step deviation method
 - d. All of these

18. The median of the data: 155, 160, 145, 149, 150, 147, 152, 144, 148 is
- a. 149
 - b. 152
 - c. 160
 - d. 148
19. The value which appears very frequently in a data is called
- a. Mode
 - b. Mean
 - c. Median
 - d. None of these
20. The collection of information, collected for a purpose is called
- a. Mode
 - b. Median
 - c. Mode
 - d. Data
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(Descriptive)

Time : 2 hrs. 30 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Describe with possible examples on different methods of presenting Research ideas or data in literature form. 10
2. What instigate to do some research? Explain its details of characteristics, types with examples. 10
3. Discuss on different types of review articles with structural representations. 10
4. Find the t-test value of the two groups of data (a) 10,20,30,40 & 50 10
(b) 15,25,35,45 & 55
5. What is standard deviation? Navigate step wise procedure to calculate it. 10
Calculate standard deviation of the data 24, 25, 47, 34, 26, 28.
6. What is measurement of central tendency? Describe different components of central tendency calculation with suitable examples. 10
7. Write short note on 5+5=10
A) Research Design
B) Research Papers
8. Write short note on 5+5=10
a) Hypothesis
b) Mean

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