

B.Sc. BIOTECHNOLOGY
SEMESTER-V
RESEARCH METHODOLOGY
BBT-504

Duration: 3 Hrs.

Marks: 70

PART : A (OBJECTIVE) = 20
PART : B (DESCRIPTIVE) = 50

[PART-B : Descriptive]

Duration: 2 Hrs. 40 Mins.

Marks: 50

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

1. Write short notes on the following: 2x5=10
 - a. Objectives of research
 - b. Literature survey
 - c. Rephrasing of research problem
 - d. Primary and secondary research
 - e. Standard error

 2. a. What do you mean by review of literature? Discuss its significance in research. 3+7=10

or

 - b. How do you define research problem? Illustrate research problems siting suitable examples. 3+7=10
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3. a. What do you understand by 'tabulation of experimental data'? Explain the reasons of considering it as very important in experimental data analysis. 4+6=10

or

- b. Give your understanding of a good research design. Is a single research design suitable in all types of research studies? Give your answer with justification. 3+7=10

- 4. a. What are the merits and limitations of the 'observation method' of data collection? Illustrate your answers with suitable examples. 10

or

- b. How does the 'case study method' of data collection differ from the 'survey method'? Analyse the merits and limitations of case study methods in sociological research. 4+6=10

- 5. Distinguish between an experiment and survey. Explain fully the survey method of research 3+7=10

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[PART-A : Objective]

Choose the correct answer from the following :

1X20=20

1. After data collection, the researchers need to follow the task of-
 - a. preparing graph
 - b. analyzing the data
 - c. writing the report
2. Applied research is to -
 - a. acquire knowledge
 - b. solve society's immediate problem
 - c. develop theory
3. T-test is applied to examine the significance of mean differences between-
 - a. two related samples of smaller size
 - b. multiple samples
 - c. samples of unknown sample size.
4. Sequential sampling is usually adopted under
 - a. field experimentations
 - b. statistically accepted sampling plan of quality control
 - c. laboratory scale experimentations
5. Research designs of a project is prepared on the basis of -
 - a. survey informations
 - b. hypothesis of study
 - c. overall aim of the project
6. The observation method commonly used in studies relating to behavioral sciences is-
 - a. a scientific method
 - b. not a scientific method
 - c. an accepted method
7. The main aim of research is to establish the-
 - a. Truth
 - b. False
 - c. Belief
8. The first approach of any research work is_
 - a. Collection of materials
 - b. Survey of literature
 - c. Procurement of equipments
9. Classification of collected data to homogeneous groups is important-
 - a. for preparing project report
 - b. for data presentation
 - c. to get meaningful relationships
10. Computer technology and its applications have made research-
 - a. Complicated
 - b. Easy
 - c. Dynamic
11. A living organism that contains a novel combination of genetic material obtained through the use of modern biotechnology is known as -
 - a. GMO.
 - b. LMO.
 - c. Both - (a) and (b).
 - d. None of the above.
12. What of the following is a drawback of trade secret-
 - a. It is a costly affair.
 - b. It offers no protection from independent innovation/ invention.
 - c. It cannot be applied to many inventions.
 - d. All of the above.
13. Formulation of Coca-Cola is an example of -
 - a. GI
 - b. Copy right
 - c. Trade secret
 - d. None of the above
14. Which one is the first product to be tagged with GI-
 - a. Darjeeling tea
 - b. Tezpur litchi
 - c. Bikaneri bhujia
 - d. None of the above



- 15. What are the two types of containment?
 - a. Physical and Biological
 - b. Organic and Inorganic
 - c. Chemical and Physical
 - d. None of the above.

- 16. A patent is valid for 15 – 20 years in most of the countries.
 - a. True
 - b. False

- 17. The NIH (National Institute of health) , USA guidelines specify the practices for constructing and handling GMOs.
 - a. True
 - b. False

- 18. Intellectual property is an idea, a design, an invention, a manuscript which rise to an useful product / manuscript.
 - a. True
 - b. False

- 19. Soyabean transgenic in Mexico is a successful example of introduction of GM food to market.
 - a. True
 - b. False

- 20. Glass-house containment A is used when no plant pathogens are used.
 - a. True
 - b. False

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Course :

Semester : Roll No :

Enrollment No : Course code :

Course Title :

Session : 2017-18 Date :

Instructions / Guidelines

- The paper contains twenty (20) / ten (10) questions.
- Students shall tick (✓) the correct answer.
- No marks shall be given for overwrite / erasing.
- Students have to submit the Objective Part (Part-A) to the invigilator just after completion of the allotted time from the starting of examination.

Full Marks	Marks Obtained
20	

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Scrutinizer's Signature

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Examiner's Signature

.....
Invigilator's Signature