

M. Sc. DEGREE EXAMINATION, NOVEMBER 2013
BIOTECHNOLOGY
FIRST SEMESTER

COURSE : ELECTIVE
PAPER : RESEARCH METHODOLOGY AND BIOETHICS
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A

ANSWER ALL QUESTIONS: (20 x 1 = 20)

DEFINE / EXPLAIN THE FOLLOWING.

1. The chapter that details the way in which the research was conducted is the _____ chapter
 - a. Introduction
 - b. Literature review
 - c. Research methodology
 - d. Data analysis
2. The validity and reliability of the data should be checked occasionally
 - a. True
 - b. False
3. The researcher should never report flaws in procedural design and estimate their effect on the findings
 - a. True
 - b. False
4. What is a good research? The following are correct except
 - a. Purpose clearly defined
 - b. Research process detailed
 - c. Research design thoroughly planned
 - d. Findings presented ambiguously
5. Plagiarism:
 - a. Similarity of structure in a pair or series of related words, phrases, or clauses
 - b. Dissimilarity of structure in a pair or series of related words, phrases, or clauses
 - c. Copying other's original writing
 - d. None of the above
6. Parallelism:
 - a. Similarity of structure in a pair or series of related words, phrases, or clauses
 - b. Dissimilarity of structure in a pair or series of related words, phrases, or clauses
 - c. Copying other's original writing
 - d. None of the above

7. Proof reading:
 - a. The process of reading written work for “surface errors.”
 - b. Structuring words, phrases, or clauses for others
 - c. Copying other’s original writing
 - d. None of the above
8. Alcohol-based hand sanitizers are just as effective as hand washing for removal of broad spectrum of infections organisms.
 - a. True
 - b. False
9. A proposal is known as a:
 - a. Work plan
 - b. Prospectus
 - c. Outline
 - d. Draft plan
 - e. All of the above
10. The purpose of _____ research is to help in the process of developing a clear and precise statement of the research problem rather than in providing a definitive answer.
 - a. Marketing
 - b. Causal
 - c. Exploratory
 - d. Descriptive
11. Every research proposal, regardless of length should include two basic sections. They are:
 - a. Research question and research methodology
 - b. Research proposal and bibliography
 - c. Research method and schedule
 - d. Research question and bibliography
12. The most important safety principle when working with transgenic plants is containment
 - a. True
 - b. False
13. Which of the following items are considered sharps?
 - a. Needles
 - b. Scalpels
 - c. Microscope slides and coverslips
 - d. All of the above
14. Which of the following practices are not allowed in the laboratory?
 - a. Eating and Drinking
 - b. Applying Cosmetics
 - c. Handling Contact Lenses
 - d. All of the above
15. Which of the following materials may be autoclaved?
 - a. Infected animal carcasses
 - b. Sharps
 - c. Biological infectious waste
 - d. All of the above

16. In the research process, the management question has the following critical activity in sequence
- Origin, selection, statement, exploration and refinement
 - Origin, statement, selection, exploration and refinement
 - Origin, exploration, selection, refinement, and statement
 - Origin, exploration, refinement, selection and statement
17. Which of the following cannot be protected by copyright?
- Folklore
 - Musical compositions
 - Literary works
 - Computer software and hardware
18. Which of the following is **not** specifically protected by intellectual property legislation?
- Copyright
 - Patents
 - Trade secrets
 - Industrial design
19. Secondary data can almost always be obtained more quickly and at a lower cost than _____ data
- Tertiary
 - Collective
 - Primary
 - Research
20. The purpose of the research proposal is:
- To generate monetary sources for the organization
 - To discuss the research efforts of others who have worked on related management question
 - To present management question to be researched and its importance
 - None of the above

SECTION – B

ANSWER ANY FOUR QUESTIONS. EACH ANSWERS SHOULD NOT EXCEED 600 WORDS: (4 x 10 = 40)

- Explain Good Laboratory Practices in research.
- Briefly discuss Clinical trials.
- What are the regulations to be kept in mind on field experiments and release of GMOs?
- Write a short note on organization of manuscript and writing of thesis.
- Describe case studies on Indian patents.
- Write short notes on TRIPS.

SECTION – C

ANSWER ANY TWO QUESTIONS: DRAW DIAGRAMS WHEREVER NECESSARY. EACH ANSWERS SHOULD NOT EXCEED 1500 WORDS: (2 X 20 = 40)

- Explain the principles and practices to be followed while carrying out a Research.
- Explain different levels of biosafety and add a note on the containment types.
- What are Intellectual Property Rights? What is the necessity and importance of different types of IPR?
- Discuss the different social and ethical issues in Human Genetics.
