

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Fourth Semester)

Branch – BIOTECHNOLOGY

RESEARCH, IPR AND ETHICS IN BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. What is the major attribute of Correlation Analysis?
(i) Association among variables (ii) Difference among variables
(iii) Regression among variables (iv) Variations among variables
2. What is the name of the conceptual framework in which the research is carried out?
(i) Research hypothesis (ii) Synopsis of Research
(iii) Research paradigm (iv) Research design
3. What is the main role of research in education?
(i) To upsurge one's social status. (ii) To increase one's job prospects.
(iii) To augment one's personal growth.
(iv) To help an applicant in becoming a renowned educationalist.
4. Which of the following features are considered as critical in qualitative research?
(i) Collecting data with the help of standardized research tools.
(ii) Design sampling with probability sample techniques.
(iii) Collecting data with bottom-up empirical evidence.
(iv) Gathering data with top-down schematic evidence.
5. How is random sampling helpful?
(i) Reasonably accurate
(ii) An economical method of data collection
(iii) Free from personal biases
(iv) All of the above
6. Which one among the following statement is true in the context of the testing of hypotheses?
(i) It is only the alternative hypotheses that can be tested.
(ii) It is only the null hypotheses that can be tested.
(iii) Both the alternative and the null hypotheses can be tested.
(iv) Both the alternative and the null hypotheses cannot be tested.
7. The term "WIPO" stands for:-
(i) World Investment policy organization
(ii) World intellectual property organization
(iii) Wildlife Investigation and Policing organization
(iv) World institute for Prevention of organized crime
8. Which of the following is an "intellectual property" as per IPR Laws in India?
(i) Original literary work (ii) Industrial Design of Maruti800 car
(iii) Trademark of Tata company (iv) All the above

Cont...

- 9 What are the *current* benefits of having foods made from genetically modified crops?
- They improve farm profitability and make some farmers' jobs easier.
 - They allow farmers to greatly increase the amount of crops produced.
 - They improve convenience for consumers, e.g. by creating foods with longer shelf lives.
 - They improve the nutritional quality of foods.
- 10 Are foods derived from genetically modified crops nutritionally superior?
- Yes, they offer substantial health advantages over foods produced from conventional crops.
 - Yes, they offer some health advantages over foods produced from conventional crops.
 - No, they are neither better nor worse than foods from conventional crops.
 - No, they are slightly less healthful than foods from conventional crops.

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 5 = 25)

- 11 a Explain the concept of Research methodology.
OR
b Summarize the criteria of good research.
- 12 a Elucidate the research design.
OR
b Narrate briefly on sampling design.
- 13 a List out the concepts of statistical population.
OR
b Discuss about the sampling in Research methodology.
- 14 a State the uses and significance of GATT.
OR
b Summarize in detail about WTO.
- 15 a Make a note on role of biosafety cabinets for research.
OR
b Give an account on Impacts of Biohazards.

SECTION -C (40 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

- 16 a Outline the steps involved in data collection.
OR
b Narrate the problems encountered by researchers during data collection.
- 17 a Discuss about the need for a research design.
OR
b Determine about the features of a good design.
- 18 a Make a note on chi square test.
OR
b Construct a note on F test and T test.
- 19 a Illustrate with examples about types of IPR.
OR
b Evaluate on Biotechnology and international trade.
- 20 a Explain about primary containment for biohazards.
OR
b Elucidate on Biosafety levels.