

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Fourth Semester)

Branch – BIOTECHNOLOGY

RESEARCH, IPR AND ETHICS IN BIOTECHNOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. Identify the methodology approach that investigates research questions which have not previously been studied in depth?
 - (i) Exploratory Research
 - (ii) Explanatory Research
 - (iii) Applied Research
 - (iv) Active Research
2. Name the research design that focuses on estimating the sensitivity and specificity of individual diagnostic tests, their predictive values, and other parameters of interest.
 - (i) Descriptive
 - (ii) Hypothetical
 - (iii) Correlational
 - (iv) Diagnostic research design
3. Indicate the expansion of ANOVA.
 - (i) Assay of Variance
 - (ii) Analysis of Molecular Variance
 - (iii) Analysis of variance
 - (iv) Analysis of Molecular Virology
4. What does the USPTO stand for?
 - (i) United Soviet Patent and Trademark Office
 - (ii) Unity States Patent and Trademark Office
 - (iii) United States Patent and Trademark Office
 - (iv) United States Products and Trademark Office
5. What is RCGM?
 - (i) Review committee on genetic manipulation
 - (ii) Rate committee on genetic manipulation
 - (iii) Relational committee on genomic manipulation
 - (iv) Review committee on genetic methods

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Determine the methods for the collection of secondary data.
OR
b. Explain the problems encountered by the researchers.
7. a. Discuss the types of sample design. Which one you prefer? Why?
OR
b. Show the features of a good research design.

Cont...

- 8 a. Determine the types of error analysis.
OR
b. Show the difference between regression and correlation.
- 9 a. Organize the contents of Patent application.
OR
b. Discuss the importance of Patent laws. Why it has to be followed?
- 10 a. Classify the types of biosafety cabinets.
OR
b. Determine the ethical issues in handling the biohazards.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a. Determine the different methods of data collection.
OR
b. Appraise the criteria of good research that are relevant to the society.
- 12 a. Classify the types of research design.
OR
b. Differentiate Census and Sampling.
- 13 a. Explain the importance of Geographical indications for Coimbatore wet grinders.
OR
b. Enumerate the importance of T-test, F-test and Chi Square test.
- 14 a. Compare Patents, Trademarks and Copyrights.
OR
b. Differentiate GATT, WIPO and TRIPS.
- 15 a. Elucidate the biosafety levels required for handling infectious microbes.
OR
b. Categorize the role, functions and constitution of GEAC.

Z-Z-Z

END