

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2023
(Fourth Semester)

Branch – ZOOLOGY

BIostatistics & RESEARCH METHODOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 The data is collected through appointed persons called
(i) Investigators (ii) Correspondents
(iii) Representatives (iv) Witnesses
- 2 The mean relationship between two related variables is
(i) Skewness (ii) Regression equation
(iii) Regression line (iv) Regression Analysis
- 3 The optimum temperature range for fixing tissues in paraffin embedding process is
(i) 30-42°C (ii) 28-44°C
(iii) 46-68°C (iv) 70-72°C
- 4 Non-ionizing radiations are
(i) Beta rays (ii) Gamma rays
(iii) X rays (iv) UV rays
- 5 The literature collected for reviewed and preferably arranged in
(i) Randomly (ii) Logically
(iii) Alphabetically (iv) Chronologically

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Differentiate primary and secondary data.
OR
b Discuss the merits and demerits of standard error.
- 7 a 'Student's t-test is a test of significance' – Justify.
OR
b Illustrate Chi-square test and its applications in biological research.
- 8 a Explain the advantages of interference microscope.
OR
b Organize the principle and significance of centrifugation.
- 9 a Evaluate the basic theory of paper chromatography.
OR
b State the uses of fluorescence atomic absorption spectroscopy.
- 10 a Discuss the purpose of reference collection for thesis writing.
OR
b Analyze the uses of internet in biological research.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Elucidate the diagrammatic representation of data with examples.
OR
b Assess the applications of co-efficient of variation with appropriate illustrations.
- 12 a Analyze the advantages and disadvantages of correlation.
OR
b Categorize the different types of ANOVA with suitable examples.
- 13 a Assess the various methods of microtechniques used for animal observations.
OR
b Elucidate the principle and applications of scanning electron microscopy.
- 14 a Enumerate the procedure of thin layer chromatography and its importance.
OR
b 'UV-Visible spectroscopy is a quantitative technique' - Justify.
- 15 a Elaborate the planning stages for writing a thesis.
OR
b Create a power point presentation for biological research.

Z-Z-Z

END