



## Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B

Coimbatore - 641 043, Tamil Nadu, India

### Bachelor's Degree Examination – January 2021

#### V Semester

Class : III UG  
Major : Zoology

Time : 3 Hours  
Max. Marks : 100

#### 18BZOC16 Biostatistics

#### Part A

10 x 1 = 10

#### Choose the Correct Answer

- The fundamental statistical indicators are
  - Correlation
  - Median
  - Variance
  - Mean
- Which of these is not a method of data collection?
  - Questionnaires
  - Interviews
  - Experiments
  - Observations
- The table which shows the frequency of each score is called a
  - Polygon
  - Pi-chart
  - Histogram
  - Frequency distribution table
- What is the main purpose of a line graph?
  - To compare two things
  - To show trends over time
  - To have an independent variable
  - So you don't have to read words
- The mode of 12, 17, 16, 14, 13, 16, 11, 14 is
  - 13
  - 11
  - 14
  - 14 and 16
- In a class of 45 students a boy is ranked 20<sup>th</sup>. When two boys joined, his rank was dropped by one. What is his new rank from end?
  - 28<sup>th</sup>
  - 26<sup>th</sup>
  - 27<sup>th</sup>
  - 25<sup>th</sup>
- The standard deviation of sampling distribution is also classified as
  - Standard error
  - Statistic error
  - Sampling error
  - Probability error
- What do ANOVA calculate?
  - R ratio
  - Z-scores
  - Chi square
  - F ratio
- In simple linear regression, the numbers of unknown constants are:
  - One
  - Two
  - Three
  - Four
- A perfect positive correlation is signified by:
  - 0
  - 1
  - +1
  - 1 to +1

**Part B**

**5 x 6 = 30**

**Answer ALL questions**

**Each answer should not exceed 400 words or two pages**

11.a. Give a note on the collection methods of data.

(or)

11.b. Explain the sampling and non sampling errors.

12.a. Describe the various methods of classification.

(or)

12.b. Sketch a pie diagram for the following data.

*Animal counts:* Lion: 18; Tiger: 24; Fox: 40; Wolf: 12; Dog: 41; Cow: 78; Camel: 13; Elephant: 18

13.a. Describe the procedure for preparation of mean with biological data.

(or)

13.b. Add a legible note on harmonic mean.

14.a. What is the standard error? Explain with formula.

(or)

14.b. Discuss the techniques of analysis of variance.

15.a. Define correlation. Write the uses and degree of correlation analysis.

(or)

15.b. Comment on regression types and regression line.

**Part C**

**5 x 12 = 60**

**Answer ALL questions**

**Each answer should not exceed 800 words or four pages**

16.a. Explain the sources of primary and secondary data.

(or)

16.b. Discuss about the sampling methods of statistics.

17.a. Discuss in detail the graphs of frequency distribution.

(or)

17.b. Illustrate the methods of tabulation of data.

18.a. Explain the merits and demerits of mean, median and mode.

(or)

18. b. What is geometric mean? Calculate geometric mean of the following data.

<i>Height (cm)</i>	:	130-140	140-150	160-170	170-180	180-190
<i>No. of persons</i>	:	5	10	16	17	8

19.a. Calculate standard deviation from the following data.

<i>Marks:</i>	15	25	35	45	50	60
<i>No. of Students:</i>	7	10	15	8	6	4

(or)

19.b. Explain in detail about the coefficient variation, and its importance.

20.a. List out the uses of Karl Pearson's coefficient of correlation. Calculate Karl Pearson's coefficient skew of the following data.

<i>Weight (kg)</i>	:	35-45	45-55	55-65	65-75	75-85	85-95	95-105	105-115
<i>No. of persons</i>	:	20	25	20	15	10	8	6	4

(or)

20.b. Discuss about the methods of regression coefficient analysis.

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