

Exam.Code:1033
Sub. Code: 7568

2063

M.E. (Bio-Technology) Second Semester
MEBIO-201: Research Methodology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) Write down the empirical relationship between mean, mode and median.
- b) Differentiate between primary and secondary source with suitable examples.
- c) What do you understand by "data collection"
- d) Comments on "Research proposal"
- e) Define dependent and independent variable with suitable example of each.
- f) Standard deviation
- g) Define Range
- h) Define Variation
- i) Define outlier
- j) ANCOVA

(10x1)

UNIT - I

II. (a) Type I and Type II error with suitable example.

(b) What do you understand by "null hypothesis" and alternate hypothesis? Discuss procedure of testing of hypothesis. (2x5)

III. Define sampling. Enlist and discuss in detail about probability and non-probability method of sampling. (10)

IV. Define Research and Research publication. Describe about the major research option. Enlist and discuss potential error in research methodology. (10)

UNIT - II

V. (a) Write in brief about the conceptions and purposes of the interview.

(b) Classify different types of interview Discuss various merits of interview and questionnaire. (2x5)

P.T.O.

(2)

- VI. (a) Classify the report writing. Discuss different steps involved in report writing.
 (b) What do you understand by report writing? Enlist objectives of same. (2x5)
- VII. (a) Statistical diameter of some particles was obtained using microscopic method
 Calculate the average statistical diameter of particle.

Size range	0.5-1.0	1.0-1.5	1.5-2.0	2.0-2.5	2.5-3.0	3.0-3.5	3.5-4.0
No of particles	2	10	22	54	17	8	5

- (b) Intelligence test on two groups of boys and girls gave the following result. Is there a significant difference in the mean scores obtained by boys and girls?

Group	SD	Mean	n
Boys	20	70	250
Girls	15	75	150

(2x5)

x-x-x