



বিদ্যাসাগর বিশ্ববিদ্যালয়

**VIDYASAGAR UNIVERSITY**

**6th Semester Paramedical Examination 2022**

**BMLT**

**PAPER—XVI (Unit-31)**

**RESEARCH METHODOLOGY AND MEDICAL STATISTICS**

*Full Marks : 40*

*Time : 2 Hours*

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

**Group—A**

Answer any *two* questions :

2×15

1. Write the major objectives of 'Basic Applied and Action' research. "Medical laboratory technologists are action researchers"— Justify the statement. Define historical research and site an example from the field of medical laboratory technology. 6+4+2+3
2. Describe 'PERT' chart in project formulation and write its importance. Classify the types of expenditures included in project. Differentiate between qualitative and quantitative research. (4+2)+6+3

3. Compute the mean and median of the following frequency distribution.

<u>Class intervals</u>	<u>f</u>
10-14	3
15-19	6
20-24	10
25-29	7
30-34	5
35-39	3

How do you compute mode from above mean and median? 12+3

4. What do you mean by one-tail and two-tail 't'-test?

Haemoglobin levels of 8 adult males and 8 adult females given in the table. Find out whether or not the mean haemoglobin level is significantly higher in males than females.

Hb levels (g/dl)	
<u>Males</u>	<u>Females</u>
16	12
18	10
15	14
14	8
12	11
13	13.5
11.5	9.5
14.5	13.0

$$t_{0.05(14)} = 1.76 \quad t_{0.05(14)} = 2.624$$

What is Null hypothesis? 3+10+2

**Group-B**Answer any *one* question.

1×10

5. Define hypothesis. Write the objective of experimental research. What are the components of experimental research. Write the importance of literature review in project proposal formulation. 2+3+3+2
6. Compute SE of the mean of the following distribution of body weight scores (kg).

<i>Class intervals</i>	50–52,	53–55,	56–58,	59–61
<i>Frequencies</i>	4	6	3	2

What is single group experimental design?

8+2