

**BACHELOR OF AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY (2017 COURSE)**

**B. A. S. L. P. Sem-I : WINTER :- 2021**

**SUBJECT: RESEARCH METHODS & STATISTICS**

**Day : Friday**

**Time : 10:00 AM-01:00 PM**

**Date 08-Apr-2022**

**W-17896-2021**

**Max. Marks: 75**

**N. B. :**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.
- 4) Answers to both the sections should be written in **SEPARATE** answer sheet.

**SECTION – A**

**Q. 1** Attempt **ANY TWO** out of **THREE** of the following: **(15)**

- a) Sampling- importance in Research
- b) Validity
- c) Hypothesis
- d) Importance of Research in ASLP

**Q. 2** Attempt **ANY ONE** out of **TWO** of the following: **(10)**

- a) Describe different steps in Research.
- b) Importance of Data collection in Research. Explain survey methods.

**Q. 3** Attempt **ANY ONE** out of **TWO** of the following: **(15)**

- a) Describe different types of Sampling.
- b) Define Variables. Describe types of Variables.

**SECTION – B**

**Q. 4** Attempt **ANY TWO** out of **THREE** of the following: **(10)**

- a) Explain the following terms:  
Type I error, Type II error, level of significance, confidence interval, cumulative frequency.
- b) Following data provides the chest measurement in cm of 50 MBBS students:

Class Measurement	No. of Students
61 – 70	2
71 – 80	10
81 – 90	20
91 – 100	17
101 – 110	1

Find Mean and Mode.

- c) Serum bilirubin levels (in mg %) of 7 patients having infective hepatitis before and after giving a herbal medicine are as:

Before	7	6	5	4	8	9	6
After	6	5.5	6	4.5	8	10	4

Is the drug useful for reducing serum bilirubin levels?

**P. T. O.**

**Q. 5** Attempt **ANY ONE** out of **TWO** of the following: **(10)**

- a) Explain properties of 'Normal Distribution'.
- b) Find median weight of 590 infants in hospital, in one year from the following table. Also locate on ogive's curve.

Weight of Infant in kg	No. of Infants
2.0 – 2.5	37
2.5 – 3.0	117
3.0 – 3.5	207
3.5 – 4.0	155
4.0 – 4.5	48
4.5 – 5.0	26

**Q. 6** Attempt **ANY ONE** out of **TWO** of the following: **(15)**

- a)
  - i) Distinguish between paired and unpaired t-test.
  - ii) The means of two samples of sizes 50 and 100 respectively are 54.1 and 50.3 and the standard deviations are 8 and 7. Obtain the standard deviation of the sample of size 150 obtained by combining the two samples.
- b)
  - i) Write a short note on 'Test of Significance'.
  - ii) Calculate Spearman's Rank correlation coefficient for the following data:

R1	R2
2	3
3	4
7	6
8	7
9	10
1	2
10	8
4	5
6	9
5	1

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