

Q.P. Code: 101389

Reg. No.:.....

**First Semester M.Sc. Audiology Degree Regular/Supplementary  
Examinations September 2023**

**A 101: Research Methods, Statistics & Epidemiology**

Time: 3 hrs

Max marks: 80

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

**Essays**

**(5x16=80)**

- (a) Distinguish basic and applied research. Explain standard group comparison with example.  
(b) Discuss Correlational Research and Ex-post Facto Research (8+8)
- (a) Differentiate cross sectional from longitudinal studies  
(b) Write a note on causality of associations (8+8)
- (a) Define Probability. Differentiate between the terms 'mutually exclusive' and exhaustive events.  
(b) "The following scores were achieved by eleven school children on a test before and after hearing aid use. Apply a t test to comment whether the children have benefited by the device. Table value of t for 10 degrees of freedom is 2.228 for t (6+10)  
0.025

Pre	23	20	19	21	18	20	18	17	23	16	19
Post	24	19	22	18	20	22	20	20	23	20	17

- (a) What is multi-variate analysis. Briefly explain its need and methods.  
(b) Using the following data, perform a one-way analysis of variance using  $\alpha = .05$ . Write the results in APA format (8+8)

Group 1	51	45	33	45	67
Group 2	23	43	23	43	45
Group 3	56	76	74	87	56

- (a) Explain the steps in evidence based practice in the context of audiology  
(b) Describe the shortcomings or arguments against evidence based practice (8+8)

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