

BACHELOR IN AUDIOLOGY & SPEECH LANGUAGE PATHOLOGY
SECOND YEAR
PAPER VII – BASIC STATISTICS AND SCIENTIFIC ENQUIRY IN AUDIOLOGY
AND SPEECH LANGUAGE PATHOLOGY

Q.P. Code: 802317

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Role of statistics in the field of audiology and speech language pathology.
2. Elaborate on experimental research design with example.
3. A study of comparing the impact of hearing loss in the life of adults who had congenital hearing loss with that of adults with acquired adult onset hearing loss was conducted. Find whether there is any association between gender of the patient and the hearing loss type at 5% level of significance ($\chi^2(1df)=3.84$)

	Congenital hearing loss	Acquired adult onset hearing loss
Male	70	30
Female	60	40

II. Write notes on:

(8 x 5 = 40)

1. Define population, sample and sampling frame with example.
2. Procedure of paired-t-test.
3. Type I and Type II error.
4. Define mean, median and mode.
5. Use of graphical representations.
6. Construct a continuous frequency distribution with an interval of 10 for the following data.

31 13 46 31 30 45 38 42 30 9 30 30
 46 36 2 41 44 18 29 63 44 30 19 5
 44 15 7 25 12 30 6 22 24 37 15 6
 39 32 21 20 42 31 19 14 23 28 17 53
 22 21

7. Ethics of research in behavioural sciences.
8. Explain stratified sampling technique and give an example.

III. Short answers on:

(10 x 3 = 30)

1. Standard deviation and variance.
2. Marginal probability.
3. Compute CV of the data given: 4, 8, 2, 8, 6, 7, 3, 5, 8, 10.
4. Mention non-parametric test alternative to independent t-test and paired t-test.
5. Define correlation with example.
6. What is spearman's rank correlation?
7. What are large sample tests?
8. Define non-probability sampling with example.
9. Define hypothesis and its types.
10. Statement of research problem.
