

B.Sc. Sem.-5 Examination

CC-303

Statistics

March-2025

Time : 2-30 Hours]

[Max. Marks : 70

Instructions:

1. All questions are compulsory.
2. Figures to the right show marks of each question.
3. Statistical tables will be provided on request.
4. Use of scientific calculator is allowed.

- Q. 1 *a* Describe in brief, the need of scaling and state different scaling methods available. 07
- b* How to Scale test items in context with level of difficulty? 07
- OR
- a* Explain, in brief, T- Score. Also, state important points that are essential to obtain T- Score. 07
- b* Write a note on Stanine Score. 07
- Q. 2 *a* State different steps required in item analysis. 07
- b* Write a note on item analysis for difficult values. 07
- OR
- a* Explain, in detail, "discriminating value of an item". 07
- b* What are different forms of item analysis of Criterion Reference Test? Describe, in detail, Criterion Reference Test. 07
- Q. 3 *a* What is reliability of test scores? Also, state its importance in the field of Psychology and education. 07
- b* Explain Split Half Method. Also, state its demerits. 07
- OR
- a* In usual notation, for reliability index, prove that $r_{0t} = \sqrt{r_{tt}}$ 07
- b* Describe test – retest method with an illustration. 07
- Q. 4 *a* Define term: validity. State different criteria used in validity. 07
- B* State uses of validity. 07
- OR
- A* State importance of validity in reliability 07
- B* What are different types of validity? Explain, in brief, Content Validity. 07
- Q. 5 Answer the following : 14
- 1* In Stanine Score, normal curve is divided in to how many parts?
- 2* What is the formula to find percentile score of rank R?
- 3* If biserial correlation coefficient of an item is 0.23, state the nature of an item.

(P.T.O)

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- 4 For a specific test item, if percentage value of R_U and R_L are 50 and 32 respectively, then obtain difficulty value, D_V .
- 5 Give the full form of IOCI.
- 6 If bi-serial correlation coefficient of an item is 0.23, state the nature of an item.
- 7 State the range of discriminating value.
- 8 Which are the two important factors affecting the reliability of a test?
- 9 What is the range of reliability?
- 10 How is validity of the test determined between the ratings and the test scores?
- 11 What does the coefficient of validity determines?
- 12 If the test or its criterion or both are not reliable, correlation coefficient between them _____. [Select an appropriate word: Decrease, increases]
- 13 What is reliability coefficient?
- 14 Give full form of PPDI.

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