

6. (a) Discuss the major differences between norm-referenced and criterion-referenced tests in terms of purpose, content, item selection, administration, score interpretation and reporting.
- (b) Describe T-scores and Stanine scores. How are they useful in test interpretation? How does one convert a raw score to a standard score or T-score? (7,8)
7. (a) Define "intelligence" in the context of psychological measurement. Discuss how the concept of intelligence has been operationalised through intelligence tests.
- (b) Explain the concept of raw score transformation. How are scores normalized using the normal probability curve? (7,8)

(1000)

[This question paper contains 8 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 9738

K

Unique Paper Code : 2373570007

Name of the Paper : DSE : Statistical Methods in Psychology and Education

Name of the Course : B.A. / B.Sc. (P)

Semester : VII

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **six** questions in all, including question No. 1 which is compulsory.

1. (A) Multiple choice :

(i) The level of measurement that allows for both differences and ratios to be meaningful is called the

P.T.O.

- (a) Nominal scale
 - (b) Ordinal scale
 - (c) Interval scale
 - (d) Ratio scale
- (ii) The reliability of a test can be increased by
- (a) Decreasing the number of items
 - (b) Increasing the number of items
 - (c) Using ambiguous items
 - (d) Ignoring item analysis
- (iii) The process of comparing an individual's test score with a predefined standard of performance is known as
- (a) Norm-referenced testing

- (b) Discuss the relationship between reliability, validity and test length. Also provide their educational implications. (7,8)
5. (a) Explain the different types of validity in psychological testing and how test length affects validity.
- (b) Describe the methods of determining reliability.:
- (i) test-retest.
 - (ii) alternate or parallel forms,
 - (iii) split-half technique.
 - (iv) internal consistency (or "rational equivalence"),
for each method, explain procedure, strengths and limitations. (7,8)

2. (a) Explain the importance of statistics in psychology and education with suitable examples. Discuss the sources of errors in psychological measurements in detail.
- (b) What are the characteristics of a good test? Explain each characteristic in detail. (7,8)
3. (a) What do you understand by the levels of measurement? Describe in details with examples.
- (b) Briefly describe the history and development of psychological measurement and testing. Explain the essential characteristics of a good psychological test and discuss its uses and limitations. (7,8)
4. (a) Explain the concept of True Score and Error Score. How the reliability coefficient is considered a measure of true variance?

- (b) Criterion-referenced testing
- (c) Standard score testing
- (d) Reliability testing
- (iv) Which of the following is an example of a psychological measurement?
- (a) Measuring body temperature
- (b) Measuring weight
- (c) Measuring anxiety
- (d) Measuring height
- (v) The coefficient that indicates the consistency of scores obtained by the same individuals on two occasions is called
- (a) Validity coefficient
- (b) Correlation coefficient

- (c) Reliability coefficient
- (d) Regression coefficient

(B) Fill in the blanks :

- (i) The scale of measurement that categorizes data without any order is called the _____ scale.
- (ii) The degree to which a test measures what it is intended to measure is known as _____.
- (iii) The process of converting raw scores into percentile scores or standard scores is called _____.
- (iv) In psychological testing, the process of ensuring that a test gives consistent results over time is called _____.

- (v) Intelligence tests are examples of _____ tests used in psychology and education.

(C) State whether the following statements are True or False.

- (i) The ordinal scale of measurement allows both ranking and equal intervals between measurements.
- (ii) Test-retest method is used to estimate the reliability of a test.
- (iii) Validity of a test depends on how consistently it measures a characteristic.
- (iv) Norm-referenced testing compares a test taker's performance with that of other individuals.
- (v) The T-score has a mean of 100 and a standard deviation of 15. (5,5,5)