(b) Describe the scaling of individual test items in terms of difficulty and scaling of ranking in terms of the normal probability curve, flow does this help in interpreting test scores? (7,8)

[This question paper contains 8 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 10371 **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) Which of the following is not a level of measurement?

A) Nominal

B) Ordinal

C) Rational

D) Ratio

(ii) Statistics in psychology primarily help in :

A) Describing and analyzing human behaviour quantitatively

B) Making random guesses about behaviour

C) Ignoring data variability

D) Avoiding use of numerical methods

(b) What is the Standard error (SE) of an obtained score on the test?

(c) What is the estimated reliability of this test in a group in which σ is 15?

(d) What proportion of the variance of scores in this test is attributable to "true" variance? (15)

6. (a) Explain the concept of T-scores. How are they useful in interpreting test results?

(b) Explain standard scores and normalized standard scores. Discuss their applications in educational and psychological testing. (7,8)

7. (a) Write short notes on percentile score and standard score.

(b) Describe the characteristics of a good test. Why are these characteristics important in educational and psychological assessment? (7,8)

3. (a) What are the general problems and sources of errors in measurement? Suggest ways to minimize these errors.

(b) Explain the meaning of validity. Also, compare and contrast reliability and validity. (7,8)

4. Explain all four common methods of determining reliability in detail. (15)

5. A given test has a reliability coefficient .80 and σ of 20.

(a) What is the index of reliability?

(iii) Reliability of a test refers to :

A) The test's ability to measure what it claims to measure

B) The consistency of test scores over time or forms

C) The average of test scores

D) The accuracy of scoring

(iv) The test-retest method is used to determine:

A) Validity

B) Reliability

C) Item difficulty

D) Correlation between tests

(v) The split-half technique is used to estimate:

A) Construct validity

B) Content validity

C) Internal consistency reliability

D) Criterion validity

(b) Fill in the blanks :

(i) _____ refers to the consistency or stability of test scores across repeated administrations.

(ii) A test should be both _____ and _____ to be considered good.

(iii) A T-score has a mean of _____ and a standard deviation of _____.

(iv) In _____ measurement, numbers are used only as labels or categories.

(v) Scaling of test items in terms of difficult) or rankings in psychology is known as _____ .

(c) Short Type Questions :

(i) What is index of validity? Give an example.

(ii) Define the index of reliability? When is the reliability coefficient satisfactory?

(5,5,5)

2. (a) Explain the history of psychological measurement and testing. How has it evolved over time?