2. Discuss the concept of variance, and standard deviation as measures of variability. (10)

3. What are standard scores and percentile ranks? Describe how they are calculated and their importance in comparing individual scores to a group. (5,5)

4. Define the normal probability curve and discuss its key properties. (10)

5. Explain in detail the concept of Analysis of relationships. (10)

Section C (15 Marks)

Attempt any **5** *questions out of* **6.**

1. Descriptive Statistics (3)

2. Standard deviation (3)

3. Spearman's rank order correlation (3)

4. Regression (3)

5. Application of normal probability curve (3)

6. Skewness (3)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1761 **I**

Unique Paper Code : 2112112303

Name of the Paper : DSC : Basic Statistics in Psychology

Name of the Course : **B.A. (Hons.) Applied Psychology**

Semester : III

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. This paper consists of **three** sections. Attempt all **three** sections.

3. Attempt **Three** questions each from sections **A** and **B**, **Five** questions from section **C**.

4. Use of a simple calculator is allowed.

Section A (45 Marks)

Attempt any **3** *questions out of* **5.**

1. Calculate the Median, Mean and Mode for the following data. (15)

Class Interval	Frequency
41-44	1
37-40	3
33-36	4
29-32	7
25-28	10
21-24	9
17-20	6
13-16	4
9-12	3
5-8	2

2. The distribution of a class test scores of 50 students is given below. Calculate 25^{th} percentile, and percentile rank for a score 48. (7.5,7.5)

Class Interval	Frequency
50-54	2
45-49	3
40-44	6
35-39	9
30-34	12
25-29	7
20-24	5
15 -19	3
10-14	2
5-9	1

3. Eight students have obtained following scores in the test of English and Hindi. Calculate the correlation coefficient between scores of English and Hindi tests using product moment method. (15)

Students	A	B	C	D	E	F	G	H
English	13	14	15	18	17	19	21	19
Hindi	28	30	29	33	30	32	36	38

4. On the assumption that IQ's are normally distributed in the population with the mean of 100 and standard deviation of 15, what percentages of cases fall?
   (a) Above 125 IQ
   (b) Below 85 IQ
   (c) Between 75 and 125 IQ (5,5,5)

5. A group of 5 students obtain following scores on the two test of aptitude test X and test Y : (15)

Students	A	B	C	D	E
Scores in X test	3	5	7	4	6
Scores in Y test	5	8	11	7	9

Determine regression equations for both tests.

Section B (30 Marks)

Attempt any **3** *questions out of* **5.**

1. Define measurement and describe the different levels of measurement. (10)