Ph.D PROGRAMME IN PSYCHOLOGY (PHDPC)

00325

Term-End Examination

December, 2015

RPC-002 : ADVANCED PSYCHOLOGICAL STATISTICS

Time : 3 hours   *Maximum Marks : **100***

Note :   (i)   *All Sections are **compulsory**.*
           (ii) *Read the instructions carefully before attempting each Section.*
           (iii) *Use of simple calculator is **permitted**.*

SECTION - A

Answer **any 10** of the following questions in about 50 words each. **All** questions carry **equal** marks.

10x4=40

1.   Ordinal and Ratio Scale.   4

2.   Mean and Median.   4

3.   Frequency polygon.   4

4.   Degrees of freedom.   4

5.   Quartile deviation.   4

6.   Advantages of Parametric Statistics.   4

7.   Linear correlation.   4

8.   Multiple regression.   4

9.   Median test.   4

10. Negative and Positive deviation from the normals. 4

11. Scatter diagram. 4

SECTION - B

Answer **any 5** of the following questions in about 200 words each. **All** questions carry **equal** marks.

5x6=30

1. Discuss Correlation. Calculate Pearson Product **2+4** Moment Correlation for the following data :

   Data 1 : 50 40 70 60 30

   Data 2 : 30 20 25 15 35

2. Define Regression. Determine regression **1+5** equations for the following data :

   Data 1 : 2 4 3 5 1 3

   Data 2 : 4 6 4 5 2 3

3. Describe Chi-Square. The Opinions of 100 **2+4** individuals belonging to high Socio-Economic Status (SES) and 90 belonging to low Socio-Economic Status were taken on a scale measuring attitude towards health.

   The data is presented below :

SES		Opinion			
		Agree	Undecided	Disagree	Total
	High	7	27	66	100
	Low	10	14	66	90

   Determine whether association exists in the opinion in regard to SES.

4. The following are the scores obtained by students 6 of government and private schools on achievement motivation. Find out whether significant difference exists between the scores obtained by the students of two different schools.

   Private Schools :   4, 6, 5, 6, 8, 7, 7, 8, 9, 10

   Government Schools : 5, 6, 12, 11, 8, 8, 7, 6, 8, 7

5. Discuss with suitable examples and diagram how 4+2 ungrouped data can be graphically presented. Discuss any three graphical presentation.

6. Discuss partial correlation and indicate its 6 advantages.

SECTION - C

Answer **any** 2 of the following questions in about 500 words each. **All** questions carry **equal** marks.
2x15=30

1. Discuss the properties and application of normal 7+8 distribution curve. Discuss the different divergence from normality using diagrams.

2. Explain the meaning of the term Analysis of 4+11 Variance. Three groups of students were taught mathematics using three different techniques. The Performance Scores are given below. Test the difference amongst the groups by using ANOVA.

   Group A : 5, 5, 9, 4, 3, 5, 4

   Group B : 6, 3, 7, 1, 3, 5, 3

   Group C : 7, 3, 7, 1, 5, 5, 5

3. Describe Mann-Whitney U test and differentiate 7+8
it from t-test. A research was carried to find out
the attitude of women from urban and rural area
towards exercise. The data is given below. Find
out whether the attitude differs between rural and
urban women.

Rural Area : 59, 60, 61, 64, 63, 51, 52, 55, 53, 57,
56, 54, 52, 64, 56, 54, 58, 56, 62, 60,
57

Urban Area : 53, 63, 63, 58, 60, 62, 66, 65, 64, 68