

**Ph.D. PROGRAMME IN PSYCHOLOGY
(PHDPC)**

Term-End Examination

June, 2017

00001

**RPC-002 : ADVANCED PSYCHOLOGICAL
STATISTICS**

Time : 3 hours

Maximum Marks : 100

*Note : All sections are **compulsory**. Use of simple calculator is permitted.*

SECTION A

*Write short notes on any **ten** of the following in about 50 words each.*

10×4=40

1. Range
2. Linear Correlation
3. SPSS
4. MANCOVA
5. Skewness
6. Canonical Correlation
7. Level of Significance
8. Kendall's Tau
9. Goodness of Fit Test
10. Eigenvalue
11. Multiple Regression

SECTION B

Answer any **five** of the following questions in about 200 words each.

5×6=30

12. Describe frequency polygon and bar diagram as methods of data presentation. 3+3

13. Compute the Mann-Whitney U-test for the following data : 6

Group A : 12, 13, 25, 46, 71, 82, 90

Group B : 13, 67, 87, 92, 46, 81, 92

14. Compute the Pearson Product-Moment coefficient of correlation for the following data : 6

	A	B	C	D	E	F	G	H
Data 1	10	12	16	23	9	41	16	14
Data 2	3	4	7	10	13	11	17	71

15. Describe path analysis and explain its functions in data analysis. 6

16. Describe the various measures of central tendency with the help of examples. 6

17. Compute a Chi-square for the following data :

6

	Low Socio-Economic Status	High Socio-Economic Status
Male	40	60
Female	20	30

Critical value : 0.01 level = 6.635

0.05 level = 3.841

SECTION C

Answer any **two** of the following questions in about 500 words each. 2×15=30

18. Compute ANOVA for the following data : 15

Group A	3	2	2	4	4	4	3	3	3	
Group B	7	7	8	7	7	8	4	3	7	8
Group C	2	2	3	4	6	7	3	2	2	1

Critical value : 0.01 level = 99.50

0.05 level = 19.50

19. What is partial correlation ? Compute partial correlation $\gamma_{12.3}$ for the following data : 4+11

$$\gamma_{12} = 0.60$$

$$\gamma_{23} = 0.80$$

$$\gamma_{13} = 0.50$$

$$\sigma_{12} = 2.0$$

$$\sigma_{13} = 4.0$$

$$\sigma_{23} = 2.0$$

20. Differentiate between ANOVA, MANOVA and MANCOVA. Explain their uses in analysing the data. 15