

MASTER OF ARTS (PSYCHOLOGY)

Term-End Examination

June, 2017

MPC-006 : STATISTICS IN PSYCHOLOGY

Time : 2 hours

Maximum Marks : 50

Note : (i) All sections are *compulsory*.

(ii) Use of simple calculator be permitted.

SECTION - A

Answer any two of the following questions in
about 450 words each : 2x10=20

1. Define and differentiate between Parametric and non-parametric statistics. 4+6
2. Explain step by step the calculation of point biserial correlation and phi coefficient and indicate their uses. 5+5
3. Explain linear and non-linear relationship. Find out the degree of relationship between the 2 data given below using Spearman's Rho. 3+7

	A	B	C	D	E	F	G	H	I	J
Data 1 :	22	23	29	20	25	27	30	34	37	35
Data 2 :	35	39	22	40	31	45	30	28	25	20

4. A research was carried out to find the effectiveness of three techniques of stress management. The data collected from three different groups on stress scale are given below. Find out using ANOVA if the obtained differences are significant. 10
- Group A (Technique 1) : 2, 4, 5, 6, 7
 Group B (Technique 2) : 3, 2, 3, 2, 4
 Group C (Technique 3) : 3, 6, 2, 4, 7
 Critical Value : 0.05 level of significance = 19.41
 0.01 level of significance = 99.46

SECTION - B

Answer **any four** of the following questions in about 250 words each : 4x6=24

5. Describe the four levels of measurement and indicate the data for which they are used. 6
6. Compute Mann - Whitney U test for the following data : 6
 Data 1 : 10, 24, 14, 15, 30, 17, 29
 Data 2 : 20, 12, 16, 18, 36, 38, 50
7. For question 'How often do you exercise ?', the replies given by males and females were categorized as frequently, occasionally, rarely and never. Is there any association between gender and frequency ? 6

	Frequently	Occasionally	Rarely	Never
Males	10	5	4	6
Females	20	10	3	2

Critical Value : for 0.01 level of significance = 11.345
 for 0.05 level of significance = 7.815

8. Compute Kendall's tau for the following data : 6

	A	B	C	D	E
X	4	7	8	9	3
Y	3	4	7	8	9

9. Describe the properties of Normal Probability Curve. 6

SECTION - C

Write short notes on **any two** of the following in about 100 words each : $2 \times 3 = 6$

10. Errors in Hypotheses testing 3
11. Correlation and Causality 3
12. Interactional effect 3