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M.A. IN PSYCHOLOGY (MAPC)

Term-End Examination

December, 2012

MPC-006 : STATISTICS IN PSYCHOLOGY

Time : 2 hours *Maximum Marks : 50*

Note : *(i) Answer **any five** questions.*

*(ii) Each questions carries **10** marks*

*(iii) Use of a simple calculator may be **permitted**.*

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1. Discuss in detail parametric tests and highlight their assumptions. **10**

2. Calculate rank correlation coefficient for the following scores obtained by employees on Emotional Intelligence [EI] and Leadership [L] **10**

	A	B	C	D	E	F	G	H	I	J	K
EI =	85	75	70	68	65	60	58	56	55	45	80
L =	90	74	70	65	64	62	60	48	50	86	82

3. Explain the concept of hypothesis testing and highlight the errors in hypothesis testing. **10**

4. Discuss in detail the setting up of the level of confidence or significance. **10**

5. A group of individuals obtained following scores on two tests A and B. Calculate regression equations for both the tests. **10**

	Individuals				
	1	2	3	4	5
Test A =	8	9	12	11	10
Test B =	10	10	20	18	12

6. A research was conducted to find out the effectiveness of three teaching methods namely, lecture method, group discussion and case study method. For this purpose three groups of 10 students each ,were formed and were assigned one of the teaching methods. The performance of the students is given as follows : **10**

Group 1 [Lecture Method]	Group 2 [Group Discussion]	Group 3 [Case Study]
6	14	10
10	8	7
9	19	8
7	15	6
10	10	5
8	11	7
11	13	9
11	12	13
10	9	11
12	12	8

Using ANOVA find out significance of difference in the performance of three groups.

- Critical values of F = 3.35 at 0.05 level of significance
- Critical values of F = 5.49 at 0.01 level of significance

7. Explain Normal Distribution and highlight its characteristics. **10**

8. The opinions of 90 educated and 100 uneducated persons were taken on a health related attitude scale. The data collected is given as follows : **10**

	Agree	No. Opinion	Disagree
Educated	14	10	66
Uneducated	27	7	66

With the help of Chi square, find out whether significant difference in opinion exists in terms of the level of education of the persons.

- Critical value of X^2 = 5.991 at 0.05 level of significance
- Critical value of X^2 = 9.210 at 0.01 level of significance.

9. Define correlation and discuss product moment coefficient of correlation in detail with suitable example. **10**

10. A researcher wanted to study the stress level of employees in public and private sector organisations. The scores of the employees are given as follows : 10

Public Sector	Private Sector
116	100
110	112
99	116
112	108
118	104
97	105
110	98
90	108
94	121
115	125
	110
	117
	106
	116
	118
	120
$N_2 = 10$	$N_1 = 16$

with the help of 'U' test find out whether scores of the two groups differ significantly or not.

- Critical value of U for
- $N_1 = 16$ and $N_2 = 10$ is 48]