

M.P.Ed. Semester-I Examination 2014

Course Code : MPED-115

(Application of Statistics in Physical Education)

Time : Three Hours

Full Marks : 40

Questions are of value as indicated in the margin

Answer **one** question from each unit

UNIT - I

1. Define statistics. Explain the need and importance of statistics in Physical Education. 2+6=8

OR

Write notes on **any four** of the following :

4×2=8

- (a) Freequency distribution (b) Different graphical representation (c) Variable and attribute
(d) Descriptive statistics (e) Inferential statistics

UNIT - II

2. What is measures of Central Tendency? Calculate Mean and SD from the following frequency distribution: 2+6=8

<u>Scores</u>	<u>f</u>
97 - 102	2
91 - 96	3
85 - 90	4
79 - 84	7
73 - 78	13
67 - 72	9
61 - 66	8
55 - 60	6

OR

What is Measures of Variability? Calculate Quartile Deviation and 36th and 64th percentiles from the frequency distribution as mentioned in Question No. 2. 2+3+3=8

UNIT - III

3. Write notes on **any two** of the following : 4×2=8

- (a) Characteristics and properties of a normal curve (b) Divergence from normality
(c) Expond $(H+T)^8$ and find out the probability of getting 6 heads and 2 Tails.

OR

What do you mean by standard score? Convert raw serves of 72 and 39 into 6-sigma and T-score when Mean and SD of a distribution are 57.13 and 8.66 respectively. 2+3+3=8

UNIT - IV

4. What is coefficient of correlation? Calculate coefficient of correlation from the following scatterogram: 2+6=8

(2)
X - variable →

		68 - 74	75 - 81	82 - 88	89 - 95	96 - 102
Y - variable ↑	60 - 66					3
	53 - 59	1		3	5	1
	46 - 52		4	3	4	2
	39 - 45	1	3	2	2	1
	32 - 38	1	2	1	1	

Significant level at 38 df at .05 level = .304, and at .01 = .393

OR

Following are the distribution of scores on an achievement test of two groups of students those who passed and failed in the test of statistics. Calculate the coefficient of Biserial correlation.

174 - 182	7	0	[y = .3863]	8
165 - 173	18	0		
156 - 164	16	9		
147 - 155	39	32		
138 - 146	30	24		
129 - 137	15	13		
120 - 128	0	5		
	125	83		

UNIT - V

5. What is null hypothesis? Find out the significance of differences (t-ratio) between following two correlated means:

<u>X-variable</u>	<u>Y-variable</u>
35	58
52	63
46	66
60	68
57	72
41	55
49	38
37	56

Find out signification level when t at .05 level at 7 df is 2.36 and at .01 level is 3.50

OR

What is non-parametric test? The opinion of 1156 Guardians from 4 Districts were taken to find out their attitude towards Physical Education in the school. The opinions were :

2+6=8

Opinion	Hooghhy	Howrah	Kolkata	Nadia	Total
Yes	185	212	225	162	784
No	68	105	115	84	372
Total	253	317	340	246	1156

Test the null hypothesis (chi-square test) using 5% level of confidence that the proportion of opinions in favour of attitude towards physical Education is same.

(χ^2 value at 3df at .05 level is 7.815)