

M.P.Ed. Examination, 2017

Semester-II

Physical Education

Course – MPCC– 201

(Applied Statistics in Physical Education & Sports)

Time – 3 Hours

Full Marks-70

Questions are of value as indicated in the margin.

Answer one question from each unit.

Unit-I

1. Define Statistics. What is the need and importance of statistical application in Physical Education and Sports? 2+12 = 14

Or

Write notes on *any four* of the following: 3.5×4 = 14

- a. Descriptive and Inferential statistics
- b. Parametric and Non-parametric statistics
- c. Data, Variable and Attribute
- d. Population and Sample
- e. Identify the following variables into continuous and discontinuous series-
 - i. Weight
 - ii. Scores in a cricket match
 - iii. No. of passengers sitting in a bus
 - iv. Scores in shuttle-run performance

Unit-II

2. What is frequency distribution? How can you organize data in the form of a frequency distribution? Why ungroup data are being organized into group data? Construct a frequency distribution from the following scores with a step interval of 8 :

36, 45, 70, 56, 41, 66, 87, 34, 61, 49, 58, 48, 80, 43, 35, 66, 45, 43, 39, 54, 50, 35, 48, 58, 47, 67, 64, 58, 62, 49, 58, 53, 65, 61, 67, 72, 74, 63, 59, 60, 56, 75, 68, 57, 54, 41, 54, 57, 67, 72, 74, 68, 63, 59, 67, 58, 61, 64 2+4+2+6=14

Or

What is Measures of Central Tendency? Which measures of central tendency would you prefer to compute on the following situations – i. Determining mid-point of the scores in an admission test ii. Most selling model of a mobile phone iii. Average achievement of a group. 2+3+9=14

Calculate Mean, Median and Mode using the scores mentioned in question no. 2 above.

P.T.O.

(2)

Unit-III

3. What is Measures of Variability? What are the different measures of variability? Calculate standard deviation, quartile deviation and P_{33} from the following distribution-
2+3+9= 14

Scores	f
140-147	2
132-139	4
124-131	12
116-123	17
108-115	11
100-107	7
92-99	2

Or

What is standard score? Why does it become essential to convert raw score into standard score? Convert raw scores of 44 and 28 into Sigma score, Hull score, and T-score when mean and standard deviation of a distribution are 36.13 and 5.74 respectively.

2+3+9= 14

UNIT-IV

4. What do you mean by Probability and Normal probability curve? Write the characteristics and properties of a normal curve. Expand $(H+T)^8$ and find out the probability of getting 3 Heads & 5 Tails and 6 Heads & 2 Tails.
4+4+6 = 14

Or

Define and explain the terms Skewness and Kurtosis along with their types. Write the uses and advantages of graphical representation of data. What is a histogram and how does it differ from bar diagram and frequency polygon?
6+2+2+4 = 14

UNIT-V

5. What is coefficient of correlation? Calculate coefficient of correlation from the following scatterogram and find out the level of significance.
2+12=14

		X-Variable →					
		62-69	70-77	78-85	86-93	94-101	102-109
↑ Y-Variable	96-107				1	3	2
	84-95	1		4		5	
	72-83		4	5	8	3	4
	60-71	5		3	3		
	48-59	2	3	2		1	
	36-47	3	2	1			1

'r' at 64 df at .05 level = .250 and at .01 level = .325

(3)

Or

Define Null hypothesis, Standard error of mean, and Degree of freedom. Find out the significance of difference (t-ratio) between two following independent means :

2+2+2+8=14

Group - A	Group - B
59	64
38	73
47	62
56	52
54	49
43	68
69	58
45	61
62	74
39	66
	51
	79

't' at 20 df at .05 level = 2.09 and at .01 level = 2.84
