

M.P.Ed. Examination, 2019
Semester-II
Physical Education
Course : MPCC-201
(Applied Statistics in Physical Education and 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 and its different types. Describe the need and importance of statistical processes in Physical Education sports. 4+10=14

Or

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

3.5×4=14

- a) Parametric and non-parametric statistics
- b) Distinguish between Descriptive and Inferential statistics
- c) Distinguish between a Variable and an Attribute
- d) Population and Sample
- e) Need of different graphical representation

UNIT – II

2. What is frequency distribution? Explain the need of frequency distribution. How can you organize data in the form of a frequency distribution? Construct a frequency distribution table from the following raw scores with a step interval of 7:

30 35 36 58 54 53 50 52 39 49 33 36 34 57 55 38 39 51 48 46 62 57 51 44 52 41 56 40
43 36 54 45 37 54 52 53 39 47 44 41 43 40 52 53 38 51 39 46. 2+2+3+7=14

Or

What is Measures of Central Tendency? Define Mean, Median, and Mode with examples. Explain why mean is most stable measures among others? Calculate Mean, Median and Mode from the following distribution: 2+3+2+7=14

<u>Scores</u>	<u>f</u>
95-99	3
90-94	9
85-89	12
80-84	18
75-79	14
70-74	7
65-69	4

UNIT – III

3. What is measures of variability? What are different measures of variability? Define the terms Percentile and Decile. Calculate Q, SD, P₅₂ and D₇ from the following distribution: 2+2+2+8=14

P.T.O.

(2)

<u>Scores</u>	<u>f</u>
70-79	2
60-69	10
50-59	15
40-49	19
30-39	16
20-29	9
10-19	5

Or

What is a standard score? Name different standard scales. Convert raw scores of 46 and 57 into 6-sigma, Hull, and T-scores when M and SD of a distribution are 51.76 and 6.28 respectively.
2+2+10=14

UNIT – IV

4. What are Probability and Normal Probability Curve? Write the characteristics of a Normal Probability Curve. Explain the terms skewness and kurtosis along with their types
2+2+4+6=14

Or

- i) Expand $(H + T)^9$ and find out the probability of getting 4 Heads and 5 Tails and 7 Heads and 2 Tails. AND 7
- ii) Following are the no. of participation of the students of Visva-Bharati in annual Athletic Meet during 2010 to 2015. Draw a Pie/Circle diagram from the following scores: 7

<u>Year</u>	<u>No. of Participation</u>
2010	382
2011	307
2012	334
2013	296
2014	434
2015	355

UNIT - V

5. Define the terms Standard Error of Mean, Degree of Freedom, and Level of confidence. Calculate significance of difference (t-ratio) between two independent means from the following two groups and find out its significance level.
6+8=14

<u>Group - A</u>	<u>Group - B</u>
16	34
14	27
22	39
28	21
11	28
26	35
19	19
31	42
20	
24	

(t-ratio at 16 df at .05 level = 2.12 at and .01 level = 2.92)

(3)

Or

What are correlation and coefficient of correlation? What are the demerits of Rank-Difference method of correlation? Calculate coefficient of correlation from the following two variables by Product Moment method using derivations are taken from mean and find out its significance level. 2+2+2+8=14

<u>X-variable</u>	<u>Y-variable</u>
15	40
18	42
22	50
17	45
19	43
20	46
16	41
21	48
12	53
24	49

('r' at 8 df at .05 level = 0.632 and at .01 level = 0.765)
