M.P.Ed. Examination, 2018
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. Explain the importance of statistical application in modern day life including Physical Education and Sports. 2+12=14

Or

Write notes on ***any four*** of the following: 3.5x4=14

(a)Types of statistics (b) Parametric and Non-parametric statistics (c) Types of Data (d) Population and Sample (e) Continuous and Discrete Variables.

Unit-II

2. What is frequency distribution and explain its importance in data processing. Why ungroup data are being organized into group data? Construct frequency distribution table from the following scores with a step interval of 7: 1+4+2+7=14

62 21 26 32 56 36 37 39 53 40 54 42 44 61 68 28 33 56 57 37 52 39 40 54 42 43 63 30 34 35 58 38 50 38 52 41 51 44 41 60 56 35 38 57 54 41 54 47 50 42 54 60 43 59

Or

What is measure of Central Tendency? Define Mean, Medium and Mode. Explain why mean is most stables measures of Central tendency? Calculate Mean, Median and Mode using the scores mentioned in Question No.2 above. 1+3+2+8=14

Unit-III

3. What are the different measures of variability? Calculate Standard Deviation, Quartile Deviation, Mean Deviation and P_{52} from the following distribution: 2+12=14

Scores	f
50-54	2
45-49	8
40-44	18
35-39	15
30-34	10
25-29	7
20-24	2

Or

Define Standard Score and write down the types of Standard Scales? Explain the need of conversion of raw score into standard score. Convert raw scores of 37 and 53 into 6-Sigma score, Hull-score and T-score when Mean and Standard deviation of a distribution are 42.18 and 6.54 respectively. 2+3+9=14

Contd. ...2

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) 9 and find out the probability of getting 7 Heads and 2 Tails and 5 Heads and 4 Tails. 4+4+6=14

Or

Define and explain the divergence from normality. Write the uses and advantages of graphical representation of data. Write different types of graphical representation. Draw a pie Diagram to represent the following data relating to the Year-wise Interversity participation in different games by the students of Physical Education: 4+2+2+6=14

Year	No. of Participation
2013	124
2014	115
2015	83
2016	141
2017	109

Unit-V

5. What is coefficient of correlation? Discuss various types of correlation. Calculate the coefficient of correlation from the following two variables by Product Moment method using deviations are taken from mean and find out the level of significance. 2+4+8=14

	X-variables	Y-variables
1.	12	21
2.	15	25
3.	24	35
4.	16	08
5.	20	24
6.	18	15
7.	26	38
8.	11	16
9.	25	20
10.	19	31

'r' at 8 df at 0.05 level = 0.632 and at 0.01 level = 0.765

Or

What are standard error of mean, degree of freedom and level of significance? Calculate significance of difference (t-ratio) between following two dependent means and find out its level of significance: 2+2+2+8=14

Pre-test	Post-test
39	54
45	63
37	42
51	47
34	49
43	68
69	58
44	61
62	64
39	66

't' at 9 df at 0.05 level = 2.26 and at 0.01 level = 3.25

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