**2017**
**2ⁿᵈ Semester Supplementary Examination**
**Applied Statistics in Physical Education and Sports**
**MPCC – 201**

**Full Marks 70**                                                         **Time: 3 Hours**

**The figures in the margin indicate full Marks. Candidates are required to give their answers in their own words as far as practicable. Illustrate the answers wherever necessary.**

**Answer all Questions**

1. **Do you believe that Statistics is essential in Physical Education and Sports.**    **5+2+3+5 = 15**
   **What do you mean by the term "Score"? Describe different types of Data.**
   **Differentiate between parametric and nonparametric test with suitable example.**

**OR**

   **Describe the meaning, function and need of Statistics in Physical Education and**    **5+5+5 = 15**
   **Sports. What are the differences between Samples and  Population? Differentiate**
   **between discrete and continuous variables with example.**

2. **Why we use  frequency table? Calculate the mean, median and mode from the**    **2+5+5+3= 15**
   **following distribution. Use short method in computing the mean.**

**Table: I**

| Score | Frequency |
|-------|-----------|
| 92-96 | 2 |
| 87-91 | 2 |
| 82-86 | 4 |
| 77-81 | 8 |
| 72-76 | 6 |
| 67-71 | 11 |
| 62-66 | 9 |
| 57-61 | 7 |
| 52-56 | 5 |
| 47-51 | 0 |
| 42-46 | 2 |

**OR**

   **Why we measure central tendency?  Calculate the mean, median and mode**    **2+5+5+3 = 15**
   **from the following distribution.**

**Table: II**

| Score | Frequency |
|-------|-----------|
| 120-122 | 1 |
| 117-119 | 2 |
| 114-116 | 3 |
| 111-113 | 5 |
| 108-110 | 6 |
| 105-107 | 10 |
| 102-104 | 7 |
| 99 -101 | 4 |
| 96 – 98 | 5 |
| 93 – 95 | 3 |
| 90 -  92 | 2 |

3. What do you mean by Variability? What are the measures of determining     2+3+5+5 = 15
variability? Calculate the SD of the frequency distribution from Table: I of
Question No. – 2. Draw a cumulative frequency graph of data from Table: I.

<div align="center">OR</div>

Why we use standard scale? Describe the methods of construction of     5+5+5 = 15
"T"-scale. Draw an Ogive of data from Table: I

3. (a) Why Mean is more important than other measures of central tendency     5+4+6 = 15
(b) What are the importance of use of Median?
(c) Following Table shows the height in cm and weight in kg of 7 students. Find out
the product moment correlation between height and weight of the students.

| Student | Height | Weight |
|---------|--------|--------|
| A | 184 | 78 |
| B | 174 | 85 |
| C | 179 | 83 |
| D | 176 | 76 |
| E | 169 | 69 |
| F | 180 | 74 |
| G | 171 | 71 |

<div align="center">OR</div>

a) A strength test is administered on 6 boys of Arts course and 10 boys of         8
Science course. Is the mean difference between the two groups significant
at 0.05 level?

| Arts | Science |
|------|---------|
| 29 | 16 |
| 36 | 28 |
| 27 | 25 |
| 36 | 32 |
| 33 | 29 |
| 25 | 21 |
| | 35 |
| | 26 |
| | 17 |
| | 21 |

b) Calculate the Product Moment Coefficient of Correlation from the following     7
Data(X = knowledge test, Y = performance test)

| Subject | X | Y |
|---------|-----|-----|
| A | 64 | 40 |
| B | 50 | 22 |
| C | 51 | 36 |
| D | 34 | 25 |
| E | 51 | 34 |
| F | 36 | 34 |
| G | 47 | 28 |
| H | 39 | 28 |
| I | 45 | 30 |
| J | 40 | 26 |
| K | 41 | 32 |
| L | 42 | 30 |

4. Write short notes on any two of the following:     5 X 2 = 10
   a) Sigma Scale            b) Properties of Normal Curve
   c) Kurtosis               d) One tailed test and two tailed test