ix) The measure of dispersion that is influenced more by extreme scores is

   a) The variance

   b) The SD

   c) The range

   d) The interquartile

x) A numerical value used as a summary measures for sample, such as sample mean, is known as

   a) Population parameter

   b) Sample parameter

   c) Sample statistic

   d) Population mean

xi) What % of values lie within three standard deviations?

   a) 68.26%

   b) 99.73%

   c) 98.54%

   d) 95.45%

xii) Which of the following is a positional average ?

   a) Mean

   b) Median

   c) Mode

   d) SD

MASTER OF PHYSICAL EDUCATION EXAMINATION, 2018

(1st Year, 2nd Semester)

APPLIED STATISTICS IN PHYSICAL EDUCATION & SPORTS

PAPER - MPCC-201

Time : Three hours   Full Marks : 70

Group - A

Answer *any three* questions.

1. What is variability ? Write down the uses of mean and SD. Calculate median and SD from the following distribution.

Class :	10-12	13-15	16-18	19-21	22-24
f :	1	2	3	7	7

Class :	25-27	28-30	31-33	34-36	37-39
f :	12	10	6	4	2

$$1+4+(4+6)=15$$

2. What is correlation ? What are the various types of correlation ? Write down the range of coefficient of correlation. Following are the scores on two components of AAHPER basketball skill test measured on ten basket ballers. Compute the product moment correlation coefficient between the performance on these tests

Under arm pass :	27	23	20	25	26	19
Over arm pass :	20	24	19	18	23	20

[Turn over

Under arm pass :   21   20   27   22

Over arm pass :   19   21   22   18

2+2+1+10=15

3. What do you mean by 'l' ratio. Mention the uses of 'l'-distribution. A pull-ups test were administered on two group of students & the data obtained are as follows :-

	Class IX	Class X
No. of Student	500	600
Mean	6	8
S.D.	2·5	3·1

Whether the difference in the mean pull-ups of the two classes is significant at 5% level ?

[Table value of z at ·05 level = 1·96]   2+3+10=15

4. Write about x^2 test and its applications. Following are the frequencies of performances of male female students towards sports.

Sex	Prefer Sports	Do not prefer sports
Male	55	20
Female	20	30

Test whether sex is related with the preference of sports.

5+10=15

iv) Which of the following is attribute variable ?

   a) IQ scores   b) VO_2 max scores

   c) Running speed   d) Room temperature

v) A test of significance or the difference between two means is :

   a) 't'-test   b) F-test

   c) x^2-test   d) All the above

vi) The error of rejecting null hypothesis when null hypothesis is true is called

   a) Type-I error   b) Type-II error

   c) Both a & b   d) None of these

vii) A list of 5 pulse rates is 70, 64, 80, 74, 92. What is the median for this list.

   a) 74   b) 76

   c) 77   d) 80

viii) The sum of deviations of the individual data elements from their mean

   a) Always > 0 b) Always < 0

   c) Always $= 0$ d) Sometimes > 0

Group - B

6. Write short notes (*any two*) : $7\frac{1}{2} \times 2 = 15$

   a) Type - I and Type II error

   b) Normal probability curve

   c) Standard error of means (SED).

   d) Skewness and kurtosis.

Group - C

Answer *any ten*.

7. Put (✓) mark on right answer : $10 \times 1 = 10$

   i) Which test is also known as variance ratio test ?

   a) F-test   b) Z-test

   c) 't'-test   d) Chi-square

   ii) Which of the following is the best measures of variability ?

   a) AD   b) QD

   c) Mean   d) SD

   iii) In a positively skewed distribution value of

   a) Mean is maximum and mode least

   b) Mean least and mode maximum

   c) Mean least and median maximum

   d) Mode least and median maximum

5. What is analysis of variance ? Write down the applications of analysis of variance. The following are error scores on a psychomotor test for four groups of equal subjects tested under four experimental conditions :

Gr. I	Gr. II	Gr. III	Gr. IV
4	9	2	7
5	10	2	7
1	9	6	4
0	6	5	2
2	6	2	7

Apply the analysis of variance to test the null hypothesis.

$2+2+11=15$