2023

RESEARCH AND STATISTICS IN PHYSICAL EDUCATION

Paper : CC-403

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Define research and research problem. Write down the characteristics of a research. Describe major divisions of a research report. 4+5+6

Or,

Define 'Basic research', and 'Action research'. Write the qualities of a good researcher. Write down the scope of research in physical education and sports. 6+4+5

2. What is research proposal and research report? Discuss different types of data collection method in research. Explain briefly any one method of data collection. 4+5+6

Or,

Write the importance of review of related literature in research. Describe different sources literature review. 8+7

3. Following data represent the score of 1-min. sit-up test, performed by 50 B.P.Ed students in an entrance test.

15	20	21	27	29	20	18	37	38	22
19	30	32	19	34	19	18	51	21	21
24	29	18	37	38	22	32	44	33	46
30	39	32	44	33	46	19	30	32	19
56	49	18	51	21	21	30	39	32	44

(a) Construct a frequency distribution table with five classes.

(b) Construct a frequency polygon graph for the frequency distribution.

(c) Show the average number of sit-ups performed by a student in a graph. 6+6+3

Or,

What is frequency distribution? Write the importance of statistics in the field of physical education and sports.

Following data represents the distribution of ages of a few persons:

Age(years)	20-24	25-29	30-34	35-39	40-44	45-49	50-54
No. of Person (f)	13	19	28	29	23	18	20

Calculate median value to show the average age of the distribution. 3+4+8

4. Answer the following questions (***any two***) : 7½×2

(a) Why is 'Mean' considered as the best measure of central tendency?

(b) Write notes on : Measures of Variability.

(c) Calculate the mean to show the average marks obtained by students of a class of 50 students in an examination from the following distribution:

Marks	20-29	30-39	40-49	50-59	60-69	70-79
No. of Students	3	4	17	14	8	4

(d) Compute the mean and standard deviation from the following set of data for the given population below.

X: 7, 5, 11, 8, 3, 6, 2, 1, 9 and 8.

5. Choose the correct option from following MCQs and write the correct answer on your answerscript (***any ten***) : 1×10

(a) Research Proposal is also called:

(i) Summary (ii) Abstract

(iii) Synopsis (iv) Methodology.

(b) If the lower and upper limits of a class is 20 and 40 respectively, the mid-point of the class is:

(i) 20.5 (ii) 29.5

(iii) 30.0 (iv) 31.0 .

(c) Which of the following is not a measure of dispersion / variability?

(i) Standard Deviation (ii) Range

(iii) Median (iv) Coefficient of Variation.

(d) Class intervals of the type 20-29, 30-39, ..., 60-69 are of

(i) Inclusive type (ii) Exclusive type

(iii) Open-end type (iv) None of these.

(e) What is the value of the mode when all values in the data set are different?

(i) 0 (ii) 1

(iii) There is no mode (iv) It cannot be determined unless the data values are given.

(f) What is the median value of the numbers 4, 8, 7, 2, 3, 5, 6, 9 ?

(i) 6.5 (ii) 3.5

(iii) 5.5 (iv) 6.0.

(g) Research that gives its results in the form of principles and theories known as

(i) Action research (ii) Basic research

(iii) Field research (iv) All of these.

(h) Books and records are the primary sources of data in

(i) historical research (ii) participatory research

(iii) clinical research (iv) laboratory research.

(i) Action-research is

(i) an applied research

(ii) a research carried out to solve immediate problems

(iii) a longitudinal research

(iv) All of the above.

(j) Find the widths for each class:

Weight (in kg)	30-35	35-40	40-45
No. of Students (f)	13	7	20

(i) 4 (ii) 5

(iii) 6 (iv) 3.

(k) Which of the following is not considered as a method of research?

(i) Survey (ii) Historical study

(iii) Observation (iv) Philosophical.

(l) The best measure of variability is

(i) Range (ii) Variance

(iii) Standard Deviation (iv) Mode.