

2021

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.*

Answer **all** the questions.

1. Define Research. Write about the need of research in physical education and sports. Discuss the scope of research in physical education and sports. 3+5+7

Or,

Elaborate different types of research. What are the different criteria for selecting a research problem in the field of physical education? Briefly enlist the qualities of a good researcher. 5+6+4

2. Write the needs for surveying related literature. What is the significance of a research proposal? How to prepare a research proposal? 4+4+7

Or,

How to prepare a project report? Discuss the different methods of collection of Data. 7+8

3. What is statistics and why is it important for physical education? Differentiate between continuous and discrete series. Find out the percentile rank of a candidate who ranked 35 in an entrance examination out of 150 candidates. 4+5+6

Or,

What is Frequency polygon? Discuss the use of the cumulative percentage frequency curve or Ogive. Calculate Standard Deviation for following set of scores :

52, 50, 56, 68, 65, 62, 57, 70. 4+5+6

4. Write notes on **any two** : 7½×2

- (a) Measures of Central Tendency
- (b) Advantages and disadvantages of grouped and ungrouped data
- (c) Importance of measures of variability
- (d) Meaning of percentile and quartile.

5. Choose the correct option and write it on your answer script (**any ten**) : 1×10

(a) Research used for studying practical problems and finding a solution to it is :

- (i) Basic research
- (ii) Applied research
- (iii) Experimental research
- (iv) Evaluation research.

Please Turn Over

- (b) Research focused on determining how education works by testing conclusions related to theories of communication, learning, performance and technology is :
- (i) Theoretical research
 - (ii) Empirical research
 - (iii) Interpretive research
 - (iv) Evaluative research.
- (c) The type of research method involving in-depth study and execution of available information in an attempt to explain complex phenomena is known as :
- (i) Philosophical research
 - (ii) Developmental research
 - (iii) Analytical research
 - (iv) Action research.
- (d) Which of the following is a quantitative method of data collection?
- (i) Observation
 - (ii) Correlation
 - (iii) Interviews
 - (iv) Interpolation.
- (e) Which of the following is not an average?
- (i) Mean
 - (ii) Median
 - (iii) Mode
 - (iv) Standard Deviation.
- (f) The mean which takes relative importance of the different items into account is :
- (i) Arithmetic mean
 - (ii) Weighted mean
 - (iii) Geometric mean
 - (iv) Harmonic mean.
- (g) The average amount by which the quartiles differ from the median is represented by the :
- (i) Range
 - (ii) Inter-quartile range
 - (iii) Quartile deviation
 - (iv) Mean deviation.
- (h) The concept of Standard Deviation was introduced by –
- (i) Karl Pearson
 - (ii) Fisher
 - (iii) Gauss
 - (iv) Spearman.
- (i) Root mean square deviation is also called :
- (i) Mean deviation
 - (ii) Standard deviation
 - (iii) Variance
 - (iv) Correlation.
- (j) The square of the standard deviation is called :
- (i) Mean deviation
 - (ii) Quartile range
 - (iii) Inter-quartile range
 - (iv) Variance.

(k) Which of the following statement about Rank correlation coefficient is true?

- (i) It can be used to compare subjective judgements.
- (ii) It cannot be adopted to handle numerical data.
- (iii) It does not give reliable information.
- (iv) It is difficult to calculate.

(l) The graphic method of studying dispersion is called :

- (i) J curve
 - (ii) S curve
 - (iii) Lorenz curve
 - (iv) Scatter diagram.
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