EDN/V/CC/06

2021

(CBCS)
(5th Semester)
EDUCATION

SIXTH PAPER
(Statistics in Education)

Full Marks: 75
Time: 2 hours

INSTRUCTIONS TO CANDIDATES

(Please read the instructions carefully before you start writing your answers)

1. Questions should be attempted as per instructions.
2. Do not copy the Questions. Indicate the Section and Question No. clearly while attempting the answer.
3. For Multiple choice answers, candidate should indicate the Question No., Sub. No., (if any) and the correct answer. For example :

   1. Name the State capital of Mizoram.

   (a) Lunglei

   (b) Aizawl

   (c) Champhai

   Candidate should provide answer as—Q. No. *1* : *(b) Aizawl*
   [Candidate should avoid writing only *(b)*]
4. Section B - Answer to Short Answer should be limited to **One Page** only.
5. The figures in the margin indicate full marks for the questions.

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SECTION : A – OBJECTIVE

(Marks: 30)

Choose the correct answer from the following: 1x30=30

1. Statistics that make use of measures of central tendency, measures of variability and correlation is called
   (a) descriptive statistics
   (b) inferencial statistics
   (c) frequency polygram
   (d) polygon

2. Histogram is also called
   (a) pie gram
   (b) monogram
   (c) column diagram
   (d) ogive

3. The surface area of a pie diagram of a circle is known to cover
   (a) 350°
   (b) 180°
   (c) 90°
   (d) 360°

4. What is the size of the class interval for the distribution 111.5-115.5,115.5-119.5, 119.5-123.5.
    (a) 5
    (b) 4
    (c) 3
    (d) 6

5. If the lower and upper limits of a class are 10 and 50 respectively, the mid-points of the class is

    (a)15
    (a) 20
    (b) 25
    (c) 30

6. Frequency distribution table usually includes
    (a) classes of scores, tallies and mid-point
    (b) classes of scores, mid-point and mean
    (c) classes of scores,tallies and frequencies
    (d) classes of scores, midpoint and contents

7. Mode is also known as
    (a) modal value
    (b) modal data
    (c) model
    (d) modal scale

8. For dealing with qualitative data, the best average is
    (a) mean
    (b) mode
    (c) median
    (d) range
9. The mode of the scores 25,17,29, 18,30,45, 25 is
    (a) 25
    (b) 17
    (c) 29
    (d) 45

10. In basketball match Thanga scored 30, Lala 25 and Mawia 45. What is the average score of the three players.
    (a) 30
    (b) 45
    (c) 33.33
    (d) 37

11. The median of the scores 10,25,7,4,13,11,6 is
    (a) 25
    (b) 10
    (c) 7
    (d) 4

12. If mean is 60.50 and median is 61. Mode will be
    (a) 60.71
    (b) 61.90
    (c) 60.78
    (d) 62

13. Measures of variability is also known as
    (a) measures of central tendency
    (b) measures of error value
    (c) measures of dispersion
    (d) measures of error

14. The simplest measures of variability is
    (a) range
    (b) average deviation
    (c) standard deviation
    (d) quartile deviation

15. The highest score in a test is 80 and the lowest score is 37. Therefore range is equal to
    (a) 56
    (b) 43
    (c) 33
    (d) 35

16. Standard deviation is often called as
    (a) simple deviation
    (b) range
    (c) rote deviation
    (d) root mean square deviation

17. The most rarely used in measure of variability is
    (a) average deviation
    (b) standard deviation
    (c) quartile deviation
    (d) range

18. If Q_3 is 80 and Q_1 is 20, what will be the value of Quartile deviation
    (a) 40
    (b) 30
    (c) 35
    (d) 25

19. The normal curve is also called as the
    (a) bell-shaped curve
    (b) circle-shaped curve
    (c) u-shaped curve
    (d) phyramid shaped curve

20. In normal curve most of the cases fall between $+1\sigma$ and -1σ is
    (a) 94.67%
    (b) 94.44%
    (c) 68.26%
    (d) 68.20%

21. In normal curve limits of the distance ±2.58 include
    (a) 95%
    (b) 93%
    (c) 92%
    (d) 99%

22. If the scores are distributed more to the right in normal distribution, it is called
    (a) kurtosis
    (b) zero skewness
    (c) positive skewness
    (d) negative skewness

23. In a normal curve, the value of kurtosis is
    (a) 0.632
    (b) 0.623
    (c) 0.236
    (d) 0.263

24. In the frequency distribution, when it almost resembles the normal curve it is called
    (a) mesokurtic
    (b) leptokurtic
    (c) platykurtic
    (d) histogram

25. Coefficient of correlation ranges from
    (a) 0 to +2
    (b) -1 to +1
    (c) -2 to +2
    (d) -3 to +3

26. Product moment method is symbolically represented by
    (a) σ
    (b) π
    (c) γ
    (d) ε

27. When a decrease in one variable leads to simultaneous decrease in another variable in any manner, it is called
    (a) negative correlation
    (b) positive correlation
    (c) zero correlation
    (d) high correlation

28. The simplest kind of correlation to be found between two sets of scores or variable is
    (a) biserial
    (b) partial
    (c) curvilinear
    (d) linear

29. The rank difference method can be used only on a _____ groups.
    (a) small
    (b) large
    (c) low
    (d) moderate

30. Product Moment method of coefficient of correlation is propounded by
    (a) Skinner
    (b) Charles Spearman
    (c) Guilford
    (d) Karl Pearson

SECTION : B – SHORT ANSWER

(Marks : 45)

Answer the following questions in not more than 1 (one) page each, choosing 3 (three) questions from each unit.

3x15=45

Unit –I

1. Differences between Descriptive and Inferential Statistics.
2. What are the advantages of graphical represntation of data ?
3. Tabulate the scores into frequency distribution from the following scores with size of class interval of 5:

   15, 27, 35, 40, 32, 23, 28, 33, 41, 42, 29, 22, 30, 18, 13.
4. The number of students in hostel, speaking different langauges is given below. Draw a piegram for this data.

Langauage	**Number of students**
Khasi	40
Bengali	50
Assamese	45
Tamil	10
Hindi	55
Total	**200**

Unit –II

5. Explain the concept of central tendency.
6. Write the uses and limitations of mode.
7. Compute the mean, median and mode from the following ungrouped data:

   10, 7, 5, 22, 12, 8, 15, 7, 14

8. Calculate the mean from the following distribution of scores :

Scores	***f***
30 - 34	2
25 - 29	3
20 - 24	5
15 - 19	4
10 - 14	3
5 - 9	3
	N = 20

Unit – III

9. What are the uses of range ?
10. Calculate the mean deviation from the following ungrouped data:
    15, 18, 14, 15, 12, 10, 7
11. Calculate the standard deviation from the following ungrouped data:
    5, 7, 9, 13, 11, 15
12. Calculate quartile deviation from the following ungrouped data
    5, 12, 13, 15, 10, 20, 16, 25, 19, 27, 7

Unit –IV

13. Write the characteristics of normal distribution curve.
14. Mention the applications of normal distribution curve in the field of education.
15. Explain the term skewness.
16. What are the different types of kurtois? Explain any one of them.

Unit –V

17. Describe the concept of correlation.
18. What are the uses of correlation ?
19. Define negative correlation.
20. What is perfect correlation?

***** End of question *****