EDN/V/06

2017

(5th Semester)

EDUCATION

SIXTH PAPER

(Statistics in Education)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(*Marks* : 50)

The figures in the margin indicate full marks for the questions

1. *(a)* Define descriptive and inferential statistics. 2+2=4

(b) Tabulate the following 40 scores into a frequency distribution with size of class interval of 5 : 6

50 40 60 35 37 40 71 58 39 79 80 45
78 44 67 61 56 70 44 59 42 50 66 54
81 56 57 43 38 67 73 57 41 62 69 48
37 44 74 34

Or

(c) Explain the importance of graphical presentation of data. 4

(d) The number of students in a hostel, speaking different languages is given below :

Language	*Number of students*
English	20
Hindi	40
Tamil	10
Assamese	5
Bengali	25
Marathi	15
Oriya	5
Total	120

Draw a pie-gram to display the data. 6

2. (a) Explain the concept of mean. What are the uses of median? 2+2=4

(b) Calculate the mean from the following distribution of scores : 6

Scores	*f*
120–122	2
117–119	2
114–116	2
111–113	4
108–110	5
105–107	9
102–104	6
99–101	3
96–98	4
93–95	2
90–92	1
	$N=40$

Or

(c) Compute the mean, median and mode of the following scores : 1+2+1=4

17, 40, 15, 35, 20, 25, 30, 39, 35, 44

(d) Calculate the median of the distribution of scores given below : 6

Scores	*f*
90–94	1
85–89	4
80–84	2
75–79	8
70–74	9
65–69	14
60–64	6
55–59	6
50–54	4
45–49	3
40–44	3
	$N = 60$

3. *(a)* What are the uses of range? 3

(b) Compute the average deviation from the following distribution of scores : 7

Scores	*f*
90–99	5
80–89	6
70–79	4
60–69	3
50–59	2
40–49	9

Scores	*f*
30–39	8
20–29	2
10–19	1
	N = 40

Or

(c) Explain the concept of measures of variability. 3

(d) Compute the quartile deviation (QD) from the distribution of scores given in question no. **3.** *(b)*. 7

4. *(a)* Explain the characteristics of normal distribution curve with suitable diagram. 6

(b) Mention the applications of normal distribution curve in the field of education. 4

Or

(c) Explain the concepts of skewness and kurtosis with suitable diagrams. 3+3=6

(d) What is normal distribution? 4

5. *(a)* Define correlation. 2

(b) Compute the coefficient of correlation between *Test–I* and *Test–II* scores of 10 students given below by rank difference method and interpret your result : 6+2=8

Students	*Scores in Test–I*	*Scores in Test–II*
A	65	71
B	48	47
C	50	58
D	75	60
E	58	65
F	60	53
G	69	58
H	73	45
I	55	50
J	82	65

Or

(c) Mention the types of correlation. 2

(d) Compute the coefficient of correlation from the scores given above in question no **5.** *(b)* by using product moment method. Interpret your result. 6+2=8

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(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 10)

Choose the most appropriate answer to the following by putting a Tick (✓) mark against it in the brackets provided : 1×10=10

1. Histogram is also called as

(a) ogive ( )

(b) pie diagram ( )

(c) column diagram ( )

(d) frequency polygon ( )

2. Statistics that make use of measures of central tendency, measures of variability and correlation is called

(a) descriptive statistics ( )

(b) inferential statistics ( )

(c) range ( )

(d) hypothesis ( )

3. The most reliable and accurate measure of central tendency is

(a) range ( )

(b) mean ( )

(c) mode ( )

(d) median ( )

4. The size of a variable or a score which occurs most frequently in central tendency is

(a) average deviation ( )

(b) mean ( )

(c) median ( )

(d) mode ( )

5. The simplest measure of variability is

(a) range ( )

(b) quartile deviation ( )

(c) average deviation ( )

(d) standard deviation ( )

6. Measures of variability are also known as

(a) measures of tendency ( )

(b) measures of correlation ( )

(c) measures of dispersion ( )

(d) measures of standard error ( )

7. The cases in a normal distribution between the mean ±2, standard deviation is

(a) 68·26% ( )

(b) 78·27% ( )

(c) 95·44% ( )

(d) 99·74% ( )

8. When a set of scores is graphically projected and found that it is more inclined towards left, it is called

(a) mesokurtic ( )

(b) leptokurtic ( )

(c) positively skewed ( )

(d) negatively skewed ( )

9. Co-efficient of correlation ranges from

(a) –2·00 through 0·00 to 2·00 ( )

(b) –2·00 through 0·00 to 1·00 ( )

(c) –3·00 through 0·00 to 1·00 ( )

(d) –1·00 through 0·00 to 1·00 ( )

10. Product-moment method of correlation is developed by

(a) Skinner ( )

(b) William Stern ( )

(c) Karl Pearson ( )

(d) Charles Spearman ( )

SECTION—B

(*Marks* : 15)

Write on the following : 3×5=15

1. Meaning of statistics

2. Uses of mean

3. Meaning of range

4. Concept of normal distribution curve

5. Uses of correlation

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