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PGIIS 1026 A-2K13

M.Sc. IInd Semester(CBCS) Degree Examination

Statistics

(Basic Statistics)

Paper -OET 2.1

Time : 3 Hours   Maximum Marks :80

Instructions to Candidates :

Answer any **six** questions from Part - A and **five** questions from Part - B

Part - A

Answer any **six** questions.   (6×5=30)

1. What precautions are to be taken during classification?
2. Outline the steps in tabulation with class intervals.
3. Explain the construction of a frequency polygon.
4. What are the pre-requisites of an ideal average?
5. Discuss the construction of less than ogive . What are its uses.
6. Define Arithmetic mean (Q.m). What are its properties?
7. Discuss various types of Kurtosis.
8. Write a note on scatter diagram.

Part - B

Answer any **five** questions.   (5×10=50)

9. In a survey, the age of 50 women at marriage was reported as follows. Prepare a frequency distribution with classes and represent the same by a histogram.

24, 25, 27, 26, 22, 23, 24, 25, 24, 25,

24, 23, 26, 28, 25, 23, 24, 25, 24, 25,

25, 22, 27, 28, 27, 26, 25, 24, 25, 28,

26, 25, 27, 25, 24, 27, 24, 25, 25, 24,

25, 24, 26, 27, 25, 27, 26, 25, 28, 26.   (10)

10. a) What are measures of central tendency? Compare arithmetic mean and median.

b) The distribution of size of holdings of cultivated land in an area was as follows.

Size of holdings (hectares)	0-2	2-4	4-6	6-8	8-10	10-20	20-40	40-60
No.of holdings	48	19	10	14	11	09	02	01

Compute the median size of holdings. (5+5)

11. a) Explain the method of grouping for finding mode in an irregular distribution.

b) The distribution of marks in statistics in a class is given below obtain the model mark.

Marks	No.of students
20-30	02
30-40	05
40-50	22
50-60	34
60-70	09
70-80	03
80-90	02
90-100	01

(5+5)

12. a) Define standard deviation. What are its properties?

b) Monthly wages of employees in a factory are distributed as follows

Wage	No.of employees
300-400	15
400-500	22
500-600	18
600-700	14
700-800	09
800-900	07
900-1000	5
1000-1100	04

(4+6)

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13. a) Define coefficient of variation. Explain its uses.

    b) The following figures give the crude birth rate per 1000 people in Switzerland from 1968-1980 components the coefficient of variation

       17.1, 16.5, 15.8, 15.2, 14.3, 13.6, 12.9, 12.3, 11.7, 11.5, 11.3, 11.6   (5+5)

14. The following table gives the total grain production (x) and the cereal production (y) check for the significance of linear correlation between x and y.

year	x	y
1	400	50
2	440	60
3	480	70
4	550	85
5	620	95
6	650	100
7	660	105
8	740	115
9	760	120

(10)

15. a) Define the two lines of regression. What are their uses?

    b) Estimate the age of wife when the age of husband is 30 years from the following data

Age of husband (x)	25	26	27	28	29
Age of wife(y)	23	23	26	24	27

(5+5)

16. Write short notes on any **two** of the following.

    a) Mean deviation

    b) Quartiles

    c) Skewness

    d) Regression coefficients.   (5 each)

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