

Sign/Stamp of Superintendent _____

ہذا میں سرپرست کا نام لکھنا ہے

KT-XI-26-I
STATISTICS (11th)
PAPER-I

Date _____

Fic No. _____

Fic No. _____

KT-XI-26-I
STATISTICS (11th)
PAPER-I

Total Time: 3 Hours

Total Marks: 75

Time: 20 Min

SECTION-A

Marks: 15

Q.1:- Select the correct answer from four possible answers (A,B,C,D) and fill the correct answer in given box.

- i. Extreme values have no effect on _____.
(A) Median (B) Mean (C) G.M (D) H.M A
- ii. The second mean moment is equal to _____.
(A) M.D (B) Q.D (C) Variance (D) S.D C
- iii. The relationship between M.D and S.D is _____.
(A) $MD = \frac{2}{3} S.D$ (B) $MD = \frac{4}{5} S.D$ (C) $MD = \frac{5}{6} S.D$ (D) $MD = S.D$ B
- iv. A statistical population may consist of _____.
(A) An infinite number of items (B) A finite number of items (C) Both of A and B (D) None of A and B C
- v. A frequency distribution can be _____.
(A) Discrete (B) Continuous (C) Both A and B (D) None of A and B C
- vi. If the observations are 20 and -20 their Am is _____.
(A) 10 (B) 0 (C) 20 (D) None of the these B
- vii. Consumer price index number is constructed for _____.
(A) All people (B) Factory workers only (C) A well-defined section of people (D) All of these C
- viii. In the regression line $y = \alpha + \beta x$, β is called the _____.
(A) Slope of the line (B) Intercept of the line (C) Neither A nor B (D) Both A and B A
- ix. Least squares method of fitting a trend is _____.
(A) Least exact (B) Most exact (C) Full of subjectivity (D) Mathematical y sound B
- x. Vital statistics is mainly concerned with _____.
(A) Birth (B) Death (C) Marriages (D) All the above D
- xi. Extrapolation relates to the _____.
(A) Past (B) Current (C) Present (D) Future D
- xii. Laspeyre's index formula uses the weight of the _____.
(A) Base year (B) Current year (C) Average of year (D) None year A
- xiii. If b_{yx} and b_{xy} are two regression coefficients, they have _____.
(A) Same sign (B) Opposite sign (C) Either same or opposite sign (D) Nothing can be said A
- xiv. A function which is to be maximized or minimized is called _____.
(A) Optimal (B) Feasible (C) Objective (D) Corner C
- xv. The idea of product moment correlation was given by _____.
(A) Six Francis Galton (B) Spearman (C) R.A Fisher (D) Karl Pearson D

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STATISTICS (11th)
PAPER-I

Total Marks: 60

Marks: 36

Time: 2 Hrs 40 Min

SECTION "B"

Q.2:- Attempt any nine parts of the following. All parts carry equal marks.

- i. Differentiate between standard deviation and variance.
- ii. Explain simple and composite index number.
- iii. Define linear and non-linear regression.
- iv. What do you mean by regression lines?
- v. Define analysis of time series.
- vi. Define vital statistics.
- vii. Differentiate between constant and variable.
- viii. Define class and class limits.
- ix. The marks obtained by 7 students on an achievement test are 17,47,15,35,25,39,44. Calculate the median marks.
- x. A population with a mean of $\mu = 10$ has $\sum x = 250$. How many scores are in the population?
- xi. Define range and coefficient of range.
- xii. Find the third quartile of the following data.
 $X=66,60,76,68,58,74,65$.

SECTION "C"

Marks:24

Note:- Attempt any three of the following questions. All questions carry equal marks.

Q.3:- Calculate quartile deviation and coefficient of Q.D of the data given below.

Marks	10-19	20-29	30-39	40-49	50-59
Frequency	3	8	14	7	4

Q.4:- Compute A.M and H.M for the following data.

Classes	65-84	85-104	105-124	125-144	145-164	165-184	185-204
f	9	10	17	10	5	4	5

Q.5:- With the help of following values.

$$n = 20, \sum x = 40, \sum y = 100, \sum x^2 = 180, \sum y^2 = 1424, \sum xy = 404$$

- i. Fit a regression line of y on x .
- ii. Find correlation coefficient.

Q.6:- Compute the 4 years centered moving averages for the following time series.

Years	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Prices	72	68	78	72	74	69	79	84	69	72	89	76

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PAPER-II

Total Marks: 24

Time: 2 Hour (Two hours)

Note:- Attempt any five questions of the following. All questions carry equal marks.

Q.1:- A population with mean $\mu = 10$ has $\sum x = 350$. How many observations are in the population?

Q.2:- Define advantages of Median.

Q.3:- Differentiate between discrete and continuous variable.

Q.4:- Define the terms class interval and class mark.

Q.5:- Compute the price relatives by taking average of the last three year prices as base from the following data.

Years	2005	2006	2007	2008	2009	2010	2011	2012	2013
Price	12.5	15	17	20	25	22.5	27.5	37.5	35

Q.6:- Define Time Series Analysis and also its main components.

Q.7:- Find the trend by the method of semi-averages.

Years	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Values	130	138	170	185	190	225	250	270	280	320