Q.P. Code : 31527

[Time: $2\frac{1}{2}$ Hours] **[Marks: 75]**

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.

Q. 1 A) Choose the correct alternative (any 8) **(08)**

1) _____ is not the measure of central tenders.
   a) mean b) media c) Range
2) The median of a given frequency distribution is found graphically with the help of _____.
   a) Histogram b) Frequency curve c) Orgine
3) Which of the following is not a possible value of the correlation coefficient _____.
   a) 0.9 b) 1.15 c) 0
4) Two regression coefficients are of _____ sign.
   a) Same b) different c) both a and b
5) The process of collecting data is called as _____.
   a) Survey b) Samples c) Population
6) _____ is used to present data involving one variable.
   a) Multiple bar diagram b) Pie diagram c) simple bar diagram
7) If $r_{xy} = 1$ then _____.
   $a)\ bxy = bxy, b)\ byx > bxy\ c)\ byx.bxy = 1$
8) If mode of a data is 45, mean is 27 then median is _____.
   a) 30 b) 33 c) 27
9) If $Q_1 = 40$ and $Q_3 = 55$, then coefficient of quartile deviation is _____.
   a) 0.1579 b) 15 c) 7.5
10) Relative measures in measures of dispersion are also considered as _____.
   a) Coefficient of deviation
   b) Coefficient of average
   c) Coefficient of variation
   d) Coefficient of uniformly

Q. 1 B) State whether the following statements are 'True' or 'False'. (any 7) **(07)**

1) The coefficient of correlation is always zero.
2) Median can be obtain from histogram.
3) Arithmetic mean is based on all observations.
4) If variance of data is 4, is standard deviation is +2.
5) If two variables are independent then they are correlated.
6) Range is the sum of the largest and smallest value in a data set.
7) If $b_{xy}>1$, then $b_{yx} < 1$
8) The width of the class interval is lower limit – upper limit.
9) Scatter diagram cannot given the degree of relationship.
10) Quartile deviation are not affected by extreme values.

Q. 2 A) For the following frequency distribution find. **(08)**

1) Class boundaries
2) Cumulative Frequencies
3) Class Marks

C.I	10-19	20-29	30-39	40-49	50-59	60-69	70-79
Frequency	4	5	11	20	15	7	8

Q. 2 B) Draw a subdivided Bar diagram to represent the following information. **(07)**

ITEMS	Family A	Family B
Food	200	250
Clothing	100	200
House Rent	80	100
Fuel	30	40
Others	90	210

OR

Q. 2 P) Find arithmetic mean and median for the following data. **(08)**

C. I	5-15	15-25	25-35	35-45	45-55
F	3	8	13	10	5

Q) Draw a more than cumulative frequency curve for the following data. **(07)**

Daily Wages	60-70	70-80	80-90	90-100	100-110
No. of Persons	2	5	12	7	5

Q. 3 A) Calculate mean deviation from mean and coefficient of mean deviation from the following data. **(08)**

Age	10	11	12	13	14
No. of Boys	2	4	7	4	3

Q. 3 B) Compute mode graphically for the following data. **(07)**

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	4	6	10	15	25	22	11	7

OR

Q. 3 P) Calculate the quartiles is Q_1 and Q_3 from the following data. **(08)**

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	8	7	5	12	28	22	8	10

Q) Find the missing frequency of the data. If mean is 54. **(07)**

C.I.	0-20	20-40	40-60	60-80	80-100
f	7	-	10	9	13

Q. 4 A) Find the Karl Peason's coefficient of correlation between x and y and interpreted it. **(08)**

X	10	12	13	16	17	20	25
Y	10	22	24	27	29	33	37

B) Find the both regression equations from the following data. **(07)**

$\sum x = 60, \sum y = 40, \sum xy = 1150, \sum x^2 = 4160, \sum y^2 = 1720$, N = 10.

OR

P) From the following data find regression equation of y on x and estimate y when $x = 8$. **(08)**

X	14	10	15	11	9	12	6
Y	8	6	4	3	7	5	9

Q. 4 Q) The arithmetic means of two samples of sizes 60 and 90 are 50 and 48 respectively. The standard deviations are 9 and 12 respectively. Find the standard deviation of the combined sample of size 150. **(07)**

Q. 5 A) What is an o-give? Explain the uses of less than and more than o-give? **(08)**

B) Explain the word statistics and describe the various uses of statistics? **(07)**

OR

Q. 5 Short notes **(any 3)** **(15)**

a) Graph and its types
b) Primary and Secondary data
c) Merits and demerits of Arithmetic mean
d) Correlation
e) Stratified Sampling

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