

Total No. of Questions : 5]

SEAT No. :

PA-1960

[Total No. of Pages : 4

[5954]-105

F.Y. B.B.A. (CA) (Semester - I)
BUSINESS STATISTICS (CA-105)
(2019 Pattern)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) *All questions are compulsory.*
- 2) *Figures to the right indicate full marks.*
- 3) *Notations & abbreviations have their usual meaning.*
- 4) *Simple calculator is allowed.*

Q1) A) Fill in the blanks : [10]

- i) The degree to which numerical data tend to spread about an average value is called the _____.
- ii) ΣX means _____.
- iii) Classification method in which upper limit of interval is same as of Lower limit class interval is called _____.
- iv) Summary and Presentation of data in tabular form with several non-overlapping classes is referred as _____.
- v) _____ diagrams are graphs of the data that are helpful in displaying the relationship between variables.

B) True or False : [6]

- i) The coefficient of determination can take on a value between -1 & +1.
- ii) A series has its mean as 15 and its coefficient of variation as 20, its standard deviation is 10.
- iii) If $\bar{X}=20$, $M = 18.5$, then $Z = 15.5$

P.T.O.

Q2) Attempt any four of the following : **[16]**

a)

Marks	10	20	30	40	50
No. of Students	8	10	20	15	7

Computer Arithmetic Mean

b) Calculate the S.D. and C.V. from the following :

14, 8, 11, 10, 13, 16, 5, 9, 12, 2

c) Calculate coefficient of correlation for the following data :

X: 2 3 4 5 6 7 8

Y: 4 7 8 9 10 14 18

d) In a simple study about coffee habit in two towns the following information was received :

Town A : Females were 40%, Total coffee drinkers were 45% and male non-coffee drinkers were 20%

Town B : Males were 55%, Female coffee drinkers were 15% and male non-coffee drinkers were 30% Represent the above data in a tabular form.

e) Compute the mode from the following data :

Size	2	3	4	5	6	7	8	9	10	11	12	13
Frequency	3	8	10	12	16	14	10	8	17	5	4	1

f) Calculate Range and its coefficient from the following data :

53, 46, 18, 16, 75, 84 and 28

Q3) Attempt any four of the following : **[16]**

a) Use a bar diagram to represent the following data :

Year : 1983 1984 1985 1986 1987

Profit of a : 2.5 2.0 1.0 2.8 3.0

company

(In Lakhs ₹)

b) Arithmetic mean of 50 items is 104. While checking it was noticed that observation 98 was misread as 89. Find the correct value of mean.

- c) Computer the quartile deviation and its coefficient from the following data :

100, 24, 14, 105, 21, 35, 106, 16, 100, 72, 68, 103, 61, 90, 20

- d) find correlation coefficient between X and Y, given that : $n = 25$ $\Sigma x = 75$, $\Sigma y = 100$, $\Sigma x^2 = 250$, $\Sigma y^2 = 500$, $\Sigma xy = 325$

- e) Find Median for the following data :

Wages :	30-40	40-50	50-60	60-70	70-80	80-90	90-100
(in ₹)							
No. of Persons	1	3	11	21	43	32	9

- f) Explain the Degree (strength) of correlation

Q4) Attempt any four of the following : [16]

- a) Define statistics. Explain the scope of statistics.
 b) Find the mid-point and width of each class given the classes below 10, 10-20, 20-40, 40-60, 60-70 above 70

- c) Draw a histogram to represent the following frequency distribution

Size of forms : 0-20 20-40 40-60 60-80 80-100
 (in hectares)

No. of forms : 12 38 16 5 3

- d) Write a note on Scatter Diagram.
 e) Two workers on the same job show the following results over long period of time :

	Worker 'A'	Worker 'B'
Mean time of completing the job (in minutes)	30	25
Standard Deviation	6	4

- i) Which worker appears to be more consistent in the time he requires to complete the job? Why?
 ii) Which worker is faster in completing the job? Why?
 f) Explain the different parts of statistical table

Q5) Attempt any one of the following :

[6]

a) From the data given below, find the regression equations :

i) Y on X

ii) X on Y

Marks : 25 28 35 32 31 36 29 38 34 32

(Economics)

Marks 43 46 49 41 36 32 31 30 33 39

(Statistics)

b) Calculate mean, median and mode from the following data :

Monthly salary : 400 600 800 1000 1200 1400 1600

(Less than)

No. of Workers : 0 4 14 33 45 49 50

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