

VCD 06/05/2022

Class: FY FMG

Sub: Business Statistics

Duration: 2.30 hrs

Max.Marks:75

NB: (1) All questions are compulsory.

(2) Figure to the right indicate full marks

(3) Use of non-programmable electronic calculator is allowed

(4) Graph paper will be provided on request.

Q.1 Fill in the blanks by choosing correct option:

(40)

- A. Primary data as compared to secondary data is
a) Less reliable c) equally reliable
b) More reliable d) sometimes more reliable and sometimes less reliable
- B. The objective of diagrammatic representation of data is _____
a) Condensation c) presentation
b) Summarization d) Analysis
- C. Which of the following is an advantage of sampling?
a) Less speed c) less costly
b) Less scope d) less accuracy
- D. Which of the following is not a source of secondary data?
a) Data obtained from newspapers c) reference books
b) Research papers d) direct personal investigation
- E. Tally sheet is used to
a) Collect primary data c) form pie diagram
b) Collect secondary data d) form frequency distribution table
- F. Mode can be obtained graphically using
a) histogram b) bar diagram c) ogives d) pie diagram
- G. Mean is a measure of
a) correlation b) regression c) central tendency d) dispersion
- H. The value of middle item when data is arranged in increasing order is
a) mean c) mode
b) median d) range
- I. Measurement based on all data values is
a) Mean b) Median c) Mode d) Range
- J. Median of 7, 8, 3, 4, 2, 5 is
a) 3 b) 4 c) 3.5 d) 4.5

- K. Inter-quartile range includes _____
 a) 1st 50% of the series c) middle 50% of the series
 b) Last 50% of the series d) highest value-lowest value
- L. Which measure of dispersion is fastest to calculate?
 a) Range b) variance c) Mean deviation d) Standard deviation
- M. If variance is 4, then the standard deviation is
 a) 2 b) 4 c) 8 d) 16
- N. Coefficient of range of the data 10, 30, 5, 25, 35 is
 a) 0.75 b) 1.33 c) 30 d) 40
- O. If first quartile is 30 and third quartile is 50, then quartile deviation is
 a) 10 b) 20 c) 40 d) 80
- P. If variable Y tends to decrease as variable X decreases then there is _____
 a) Negative correlation c) No correlation
 b) Inverse correlation d) Positive correlation
- Q. Day temperature and sale of woolen clothes will show
 a) Positive correlation c) no correlation
 b) Negative correlation d) zero correlation
- R. Scatter diagram is used to study
 a) Measure of central tendency c) correlation
 b) Measure of dispersion d) regression
- S. If we are given two regression lines then we can obtain _____
 a) Both mean and correlation coefficient
 b) Both mean and both standard deviation
 c) Only one mean and both standard deviation
 d) Both means and only one standard deviation
- T. If two regression coefficients are 0.8 & 0.2 then the value of correlation coefficient is
 a) 0.4 b) 0.16 c) -0.4 d) -0.16

Q.2. Attempt any one.

(07)

A. Define statistics. Write 5 functions of Statistics.

OR

B. Draw histogram and frequency polygon for the following data:

C.I	10-15	15-20	20-25	25-30	30-35	35-40	40-45
f	10	12	13	22	20	7	4

Q.3. Attempt any one.

(07)

A. Find arithmetic mean and mode for following data:

x	10	20	30	40	50
f	6	11	20	15	8

OR

B. Calculate fourth decile for given data:

C.I	0-10	10-20	20-30	30-40	40-50
frequency	10	20	35	15	20

Q.4. Attempt any one.

(07)

A. The data given below is of wages of workers. Find out which group is more consistent.

	Group 1	Group 2
Mean	120	85
Variance	9	16

OR

B. Find inter-quartile range for the following data:

C.I	2000-3000	3000-4000	4000-5000	5000-6000	6000-7000	7000-8000	8000-9000	9000-10,000
f	20	25	40	50	30	18	12	5

Q.5. Attempt any one.

(07)

A. Find the two regression equations for the given data.

	x	y
Mean	6	8
s.d	5	13

Correlation coefficient(r) is 0.53

OR

B. Calculate the Karl Pearson correlation coefficient for the following data:

X	17	8	12	13	10	12
Y	13	7	10	11	8	9

Q.6. Write a short note on the followings. (Any two)

(07)

- Positive and negative correlation
- Requisites of good measure of central tendency
- Limitations of Statistics
- Primary and secondary data
- Merits and demerits of range