

VCD 070522

Class: FYBFM

Sub: Business Statistics

Duration: 2.30 hrs

Max. Marks: 75

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

(40 Marks)

- A. Circular diagrams are always _____
a) 1-dimensional b) 3-dimensional c) 2-dimensional diagram d) Cartogram
- B. The objective of diagrammatic representation of data is _____
a) Condensation b) presentation c) Summarization d) Analysis
- C. Secondary data _____
a) Never be used b) should be used after careful scrutiny c) Adequate d) collected
- D. Which of the following is not a method of data collection?
a) Questionnaire b) Observation c) Interviews d) Experiment
- E. Numerical data presented in descriptive form is called
a) Classified b) Graphical presentation c) Tabular presentation d) Textual presentation
- F. Median is _____
a) 50th Percentile b) 4th Percentile c) 6th Octile d) 7th Percentile
- G. The value which occurs with the maximum frequency is called _____
a) Median b) Mode c) Mean d) Quartile
- H. In formula of median for grouped frequency distribution, N is _____
a) Total frequency b) Frequency c) Frequency density d) cumulative frequency
- I. In which of the followings, equal interval of each class is must?
a) Mean b) Median c) Mode d) Range
- J. Frequencies are also called as weights. _____
a) True b) False c) Both d) None
- K. Inter-quartile range includes _____
a) 1st 50% of the series b) middle 50% of the series c) Last 50% of series d) none
- L. The measurement least affected by extreme values of the series is _____
a) Range b) Quartile deviation c) Mean deviation d) Standard deviation
- M. Which one of the followings is an absolute measure of dispersion?
a) Range b) Mean Deviation c) Quartile Deviation d) Standard Deviation
- N. If $CV=50$ and $S.D=10$ then $\bar{X} =$ _____
a) 10 b) 15 c) 20 d) 25
- O. Which one of the following is not measure of dispersion?
a) Range b) Mean c) Inter-Quartile range d) Variance
- P. If variable Y tends to decrease as variable X decreases then there is _____
a) Negative correlation b) No correlation c) Inverse correlation d) Positive correlation
- Q. In 1904, the rank correlation method was developed by _____
a) Karl Pearson b) C.E Spearman c) Bowley d) Kelly
- R. Coefficient of correlation is used to find _____
a) Yon X b) Variability of data c) strength of relationship between X & Y d) None
- S. If we are given two regression lines then we can obtain _____

- a) Both mean and correlation coefficient b) mean & SD c) mean d) None of these
 T. If two regression coefficients are 2 & 0.45 then the value of r is _____
 a) 0.90 b) 0.30 c) 0.95 d) 0.03

Q.2. Attempt any one.

(07Marks)

A. Write limitations of Statistics.

OR

B. Prepare a frequency distribution table from the following data and also find greater than cumulative frequency.

Marks of the students	No. of students
Below 5	10
Below 10	32
Below 15	37
Below 20	50
Below 25	55

Q.3. Attempt any one.

(07Marks)

A. Find the median of the following data:

C.I	60-75	75-90	90-105	105-120	120-135	135-150
F	3	3	6	5	7	6

OR

B. Arithmetic mean of heights of 100 boys is 150cm and that of 50 girls is 144cm. Find the combine arithmetic mean of 150 students.

Q.4. Attempt any one.

(07Marks)

A. Write merits of mean deviation.

OR

B. 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

Q.5. Attempt any one.

(07Marks)

A. Find Karl Pearson's coefficient of correlation for the following data:

$$\sum x = 65, \sum y = 30, \sum x^2 = 3261, \sum y^2 = 1004, \sum xy = 750, n = 9$$

OR

B. A house wife wishes to mix two types offood F1 and F2 in such a way that thevitamin contents of the mixture containat least 8 units of vitamin A and 11 unitsof vitamin B. Food F1 costs Each 60/Kgand Food F2 costs Each 80/kg. Food F1contains 3 units/kg of vitamin A and 5units/kg of vitamin B while Food F2contains 4 units/kg of vitamin A and 2units/kg of vitamin B. Formulate thisproblem as a linear programmingproblem to minimize the cost of themixtures.

Vitamin Theorem	Food in Kg		Requirements (in units)
	F1	F2	
Vitamin A(units/kg)	3	4	8
Vitamin B(units/kg)	5	2	11
Cost(E/kg)	60	80	

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

(07Marks)

- Explain advantage of sampling
- Demerits of range
- Explain scatter diagram
- Define the following:
 - Decision variable
 - Objective function
- Define Statistics.

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