FD-978

BBA 2nd Semester
Examination, May-June 2022

BUSINESS STATISTICS

(108)

Time : Three Hours]   [*Maximum Marks* : 90
[*Minimum Pass Marks* : 32

Note : Answer **all** questions. All questions carry equal marks.

Unit-I

1. "Statistics is the science of estimates and probabilities." Giving limitations of statistics comment on this statement.

OR

What are the objects of calssification of data ? Discuss the different methods of classification.

Unit-II

2. There are 100 students in a class. Their marks have been tabulated in a frequency distribution having seven class-intervals of equal size. The first class-interval is 10-20. The cumulative frequencies of the 4th, 5th and 6th class-intervals are 45, 75 and 95 respectively. Calculate the Median marks.

Also find the Mode and Mean if the frequency of the second class is double of the first class but equal to the third class and the frequency of the fourth class is half of the fifth class.

OR

A scooterist purchased petrol at the rate of ₹ 14, ₹ 15.50 and ₹ 16 per liter in three successive years. Calculate the average price of petrol —

(*i*) if he purchased 150, 160 and 170 liters of petrol in three years, and

(*ii*) if he spent ₹ 2,200, ₹ 2,506 and ₹ 2,500 in the three years.

Unit-III

3. From the following information, determine the actual class-intervals of the distribution. The Mean and Standard Deviation are 127 and 6.4 respectively :

Deviations (dx)	–2	–1	0	+1	+2
Frequency (f)	6	12	16	6	10

OR

What is the concept of standard deviation ? How is standard deviation calculated ? What are its merits and demerits ?

Unit-IV

4. Calculate correlation coefficient between age and illiteracy :

Age Group (in Year)	Total Population ('00)	Literate Population ('00)
10-20	1200	1100
20-30	1000	925
30-40	800	740
40-50	500	470
50-60	350	310
60-70	250	220
70-80	50	45

OR

Explain the meaning and importance of correlation.

Unit-V

5. Compute Fisher's Index Number from the data given below and show that how it satisfies Time Reversal Test :

Commodity	Base Year		Current Year	
	Price ₹	Quantity kg	Expense ₹	Quantity kg
Q	30	40	2,000	50
R	22	20	1,000	35
S	54	15	1,320	55
T	20	40	2,340	45
U	15	30	630	15

OR

What is Time Series ? Describe its components and explain the method of least squares to estimate its trend.

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