000713

PRN:		Course Code :	U28SE201

First Year **BBA** Semester End Examination Winter 2024

Quantitative Techniques for Management

Day and Date: Fri 2 1 NOV 2024 Max Marks: **50**

Time : 02:00PM To 04:00PM Duration: **2** hrs.

Instructions: i. All questions are compulsory.
ii. Figures to the right indicate full marks.

Q.1 **Attempt the following**

	Marks	Bloom's Level	CLO
Prepare less than and more than cumulative frequency distributions of the below data representing product sales of 200 employees,	10	3	1

Value in Rs.	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90
Sales	12	25	34	45	19	26	18	21

Q.2 **Attempt the following**

a) The Following Data shows monthly expenditure on various heads by family values are in rupees, represent the data in pie chart. — 05 | 2 | 1

Head	Food	Education	Leisure	Health	Investment
Values In '000Rs	120	156	240	145	190

b) Draw the frequency curve for the below data and comment on the distribution of data. — 05 | 3 | 1

Category	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90
Products	15	28	57	70	86	50	32	24	10

OR

c) The data represent sales of 6 Cars during the financial year 2023-24 are given in the table below, represent the data using bar chart. — 05 | 3 | 1

Product Code	Car-A	Car-B	Car-C	Car-D	Car-E	Car-F
Sales	120	145	160	220	150	90

Q.3 **Attempt the following**

a) Following is the frequency distribution of random sample of 220 sales executives and their weekly sales in ('000Rs) from FMCG company, determine the mean of the following data. — 05 | 5 | 2

Weekly Sales in ('000 Rs.)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Number of Salesmen	15	30	40	15	26	18	25	10	42

b) Discuss on types of Bar charts used to represent the data in a graphical way. — 05 | 2 | 2

OR

ESE

c) Discuss on Characteristics of Measures of Central Tendency from Business Research. 05 2 2

Q.4 Attempt the following

a) Define Measures of dispersion used in business research. 05 2 3

b) The Average monthly sales of the 130 companies during the financial year 2021-22 are given in the table below, Analyze the deviation from the average sales by mean deviation. 05 4 3

Average Monthly Sales	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Number of Companies	10	16	18	30	24	14	10	8

OR

b) Following is the frequency distribution of random sample of sales executives and their weekly sales in ('000Rs) from FMCG company; determine the Standard Deviation of the following data. 05 4 3

Weekly Sales in ('000 Rs.)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Number of Salesmen	10	16	21	25	35	26	22	18	15

Q.5 Attempt Any Two 10

a) With suitable example explain the concept of positive correlation between two business variables. 05 2 4

b) Following is the 1 year data monthly maintenance expenses in ('000Rs.) of a textile industry and the number of defective products. Analyze the correlation by applying Karl Pearson's correlation coefficient method. 05 4 4

Maintenance Expenses	12	14	16	21	25	15	16	26	30
Number of Product	6	8	11	25	34	10	11	35	29

c) Interpret the application of method of semi average in business forecasting. 05 4 4

ESE