GUJARAT TECHNOLOGICAL UNIVERSITY
B.VOC- SEMESTER–II EXAMINATION – WINTER 2024

Subject Code:1122201   **Date:21-12-2024**

Subject Name: Business Statistics

Time:02:30 PM TO 04:30 PM   **Total Marks:50**

Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

Q.1	**(a)**	What is statistics? Explain importance and limitations of statistics.	**05**
	(b)	Write a Note: Types of Graphs	**05**

Q.2	**(a)**	The following table shows the number of infant per family. Calculate mean by using given data.	**05**

No. of Infants	0	1	2	3	4	5
No. Of Families	4	8	23	8	6	3

(b)	Draw histogram and frequency polygon on the same graph paper for the following frequency distribution.	**05**

Class	15-20	20-25	25-30	30-35	35-40	40-45
Frequency	20	30	50	40	25	10

OR

(b)	Calculate the median from the given information.	**05**

Absent Days	0	1	2	3	4	5
Absent Students	8	12	18	9	5	1

Q.3	**(a)**	From the following information calculate Range and Relative Range.	**05**

Monthly Income(Rs.)	35000	40000	50000	75000	100000	120000
No. of Employees	3	21	30	19	6	5

(b)	Write advantages and disadvantages of Quartile Deviation.	**05**

OR

Q.3	**(a)**	Write a Note: Dispersion	**05**
	(b)	The run scored by batsman in last seven matches are:	**05**

52, 58, 40, 60, 54, 38, 48. Calculate Standard Deviation and Variance.

Q.4 **(a)** Write a Note: Sampling Methods(any 2)   **05**

(b) State advantages & dis advantages of sampling.   **05**

<div align="center">OR</div>

Q.4 **(a)** Find the trend by four year moving average from the given information.   **05**

Month	March	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Sales(Rs.)	5	3	7	6	4	8	9	10	8	9

(b) Explain the characteristics of a good sample.   **05**

Q.5 **(a)** Calculate coefficient correlations by Karl Pearson's method.   **05**

x	25	38	30	28	34	40	36
y	65	75	68	70	72	79	75

(b) From the given information calculate regression line y on x.   **05**

X	5	7	5	12	8	3
Y	8	9	10	15	10	6

<div align="center">OR</div>

Q.5 **(a)** Calculate coefficient correlations by Spearman's rank Correlation method.   **05**

Group	A	B	C	D	E
Rank X	2	5	1	4	3
Rank Y	4	1	5	2	3

(b) Describe Components of time series in detail.   **05**

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