

**G. S. College of Commerce & Economics, Nagpur**

An Autonomous Institution

(Affiliated to Rashtrasant Tukadoji Maharaj Nagpur University)

First Semester Bachelor of Business Administration Examination (CBCS)

**BUSINESS MATHEMATICS AND STATISTICS**

(BBASFC 1.0)

Time: 3 Hours

Maximum Marks: 80

N.B. : 1) All questions are compulsory.

2) Draw well-labelled diagrams wherever necessary.

Q.1 (A) Present the following data of percentage marks of 60 students in the form of frequency table with ten classes of equal width, one class being 40-49: 10

41	17	33	63	54	92	60	58
70	06	67	82	33	44	57	49
34	73	54	63	36	52	32	75
60	33	09	79	28	30	42	93
43	80	03	32	57	67	24	64
63	11	35	82	10	23	00	41
60	32	72	53	92	88	62	55
60	33	40	57				

OR

(B) Prepare an ordinary frequency table from the following table and then convert it into "More than cumulative frequency table":

Class Interval	Frequency
Below 10	17
Below 20	22
Below 30	29
Below 40	37
Below 50	50
Below 60	60

Q.2 (A) 10

Class:	1-8	9-16	17-24	25-32	33-40
	41-48	49-56	57-64	65-72	73-80
Frequency :	2,	4,	7,	13,	18,
	24,	17,	9,	5,	1

Compute the mean and mode in the above distribution.

OR

(B) Find out the Karl Pearson's co-efficient of Skewness based on mode from the following data.

Class Below :	1200,	1400,	1600,	1800,	2000,	2200,	2400,	2600
Frequency :	5,	15,	28,	42,	242,	290,	320,	350

Q.3 (A) From the following table, calculate the Karl Pearson's co-efficient of Correlation Between age of Husbands and Wives: 10

Contd.

Age of Wives (Years)	Age of Husbands (Years)					Total
	20-30	30-40	40-50	50-60	60-70	
55-65	--	--	--	4	2	6
45-55	--	--	4	16	5	25
35-45	--	1	12	2	--	15
25-35	--	10	25	2	--	37
15-25	5	9	3	--	--	17
Total	5	20	44	24	7	100

OR

10

(B) From the following data calculate:

- Two Regression Co-efficients.
- Two Regression Equations.
- Co-efficient of Correlation and interpret it.

Age of Husbands:	18	19	20	21	22	23	24	25	26	27
Age of Wives :	14	16	16	18	18	19	20	20	21	21

Q.4 (A) Find out Simple Interest on an amount Rs. 24000 and Compound Interest on Rs. 50,000 For 24 months at 9% p.a.

10

OR

(B) A Person donates 3% of his income and spends 90% of his income on his family. If a Balance of Rs. 1750 is with him, find out his income.

Q.5 Answer the following questions in about 75-100 words. (Any Two)

08

- Define Statistics and mention any 4 limitations of Statistics.
- What are the types of classification of Data?
- What do you mean by primary data? Mention any 4 sources for collection of primary data.

Q.6 Answer the following questions in about 75-100 words. (Any Two)

08

- Enumerate the important characteristics of a good measure of Central Tendency.
- What are the objectives and functions of Statistical Averages?
- What do you understand by Dispersion? What are the properties of an ideal measure of Dispersion?

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Q.7 Answer the following questions in about 75-100 words. (Any Two)

- Explain the meaning and significance of Correlation.
- What is regression analysis? State the application or utility of regression analysis.
- Differentiate between Correlation and Regression.

Q.8 Answer the following questions in about 75-100 words. (Any Two)

08

- What do you mean by Quantitative Techniques? Give its Classification.
- Explain the role of Quantitative Techniques in Business and Industry.
- What are the limitations of Quantitative Techniques?

Q.9 Answer the following questions in about 3-4 sentences:

08

- What do you mean by Secondary Data?
- Give the formula for calculating Bowley's Co-efficient of Skewness .
- What is the range of the Co-efficient of Correlation?
- Write any two characteristics of Ratio.

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