Course Code: **24BB1C07**

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

I-BBA I-Semester Regular/Supplementary Examinations (BR24), Feb/Mar - 2026

BUSINESS STATISTICS AND LOGIC (BBA)

Time: 3 hours Max. Marks: 70

Question Paper consists of Part-A and Part-B

Answer ***ALL*** *the question in* ***Part-A and Part-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1.a)	Applications of Statistics	(2M)	CO1	BL2
b)	Mention the parts of a Table	(2M)	CO1	BL2
c)	Weighted arithmetic mean	(2M)	CO2	BL3
d)	Define Geometric mean	(2M)	CO2	BL1
e)	Explain Kurtosis mention types of kurtosis	(2M)	CO3	BL2
f)	What are the characteristics of ideal measure of dispersion	(2M)	CO3	BL5
g)	Define correlation and types of correlation.	(2M)	CO4	BL1
h)	Explain Probable error.	(2M)	CO4	BL2
i)	Arithmetic Progression.	(2M)	CO5	BL6
j)	Deductive Reasoning.	(2M)	CO5	BL6

PART–B (5X10 = 50M)

2.a. What is the basis of classification? Explain. (5M) CO1 BL2

2.b. The following table gives the break-up of the expenditure of a family on different items of consumption. Draw percentage bar diagram to represent the data. (5M) CO1 BL2

Item	Food	Clothing	Rent	Fuel	Education	Others
Expenditure (Rs)	240	66	125	57	42	190

(OR)

3a. For the data given below draw less than and more than Ogives and hence find the Median. (10M) CO1 BL2

Weekly wages less than ('00 Rs)	20	40	60	80	100
No. of Workers	41	92	156	194	201

4a. From the following data compute Q_1, Q_3, D_6, and P_{80} (10M) CO2 BL3

Age	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60
Number of Students	60	80	90	150	180	130	140	60

(OR)

5a. The mean mark in Statistics of 100 students in a class was 72. The mean mark of boys was 75, while their number was 70. Find the mean marks of girls in the class. (5M) CO2 BL3

5.b. Find the Geometric mean for the following distribution (5M) CO2 BL3

Marks	0 – 10	10 – 20	20 - 30	30 - 40	40 - 50
No. of students	5	7	15	25	8

6a. Find the Quartile deviation & its coefficient for the following Income distribution. (10M) CO3 BL5

Income (in Rs.)	Less than 50	50-70	70-90	90-110	110-130	130-150	Above 150
No. of persons	54	100	140	300	230	125	51

(OR)

7a. Calculate mean deviation from mean for the following data. (5M) CO3 BL5

Class Interval	2 – 4	4 – 6	6 – 8	8 - 10
Frequency	3	4	2	1

7.b. An analysis of monthly wages paid to workers of two firms A and B belonging to the same industry gives the following result: (5M) CO3 BL5

	Firm -A	Firm- B
Number of workers	500	600
Average daily wage	186	175
Variance of wages	81	100

(i) In which firm, A or B, is there greater variability in individual wages?

(ii)Calculate the average and variance of the wages of all workers in the firms A and B taken together.

8.a. Calculate coefficient of correlation between birth rate and death rate for the following data: (5M) CO4 BL3

Year	2011	2012	2013	2014	2015	2016	2017
Birth rate	24	26	32	33	35	30	32
Death rate	15	20	22	24	27	24	20

8.b. Explain Rank correlation. Discuss the concept of rank correlation when there is a tie between ranks. (5M) CO4 BL3

(OR)

9a. The following table gives the marks obtained by 10 students in commerce and Statistics. Calculate the rank correlation coefficient. (5M) CO4 BL3

Marks in Statistics: 35 90 70 40 95 45 60 85 80 50

Marks in Commerce: 45 70 65 30 90 40 50 75 85 60

9.b. Calculate correlation coefficient between the series A and B given below: (5M) CO4 BL3

Series A: 57 59 62 63 64 65 55 58 57

Series B: 113 117 126 126 130 129 111 116 112

10.a. Ram gives his son Rs. 100 on one day, Rs. 50 on the second day, Rs. 25 on third day and so on. What will be total amount given by Ram to his son starting from the first day, if he lives forever? (5M) CO5 BL6

10.b. If 'I $ J' means 'I is the father of J', 'I *J' means 'I is the mother of J', 'I @ J' means 'I is the wife of J', then which of the following means 'K is the grandmother of L'? (5M) CO5 BL6

(OR)

11.a. If 'P + Q' means 'P is the father of Q', 'P × Q' means 'P is the brother of Q'; 'P –Q' means 'P is the mother of Q', then which of the following is definitely true about C – A + B? (5M) CO5 BL6

11.b. One day, Ravi left home and cycled 10 km southwards, turned right and cycled 5 km and turned right and cycled 10 km and turned left and cycled 10 km. How many kilometres will he have to cycle to reach his home straight? (5M) CO5 BL6

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