

**Bachelor of Commerce Examination: October - 2022
(Distance Education) (New Course)**

Day & Date	Semester	Subject Name	Time	Code	Marks
Saturday 15/10/2022	II (Fresh/ Repeater)	Business Statistics	11.00 AM To 02.10 PM	245208	75

**Instructions: 1) Questions 8 & 9 are Compulsory.
2) Answer any four questions from the rest.**

Q.1 a) Find the missing frequency if the mean marks are 26.75 05

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	3	-	15	10	5

b) The mean of 10 observations was found to be 28. Later it was discovered that one observation 14 was mis read as 24. Find the correct mean. 05

Q.2 a) Calculate Modal value from the following data: 05

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of Students	3	5	7	10	12	15	12

b) Calculate D_5 and P_{55} for the following data. 05

No of Rooms	3	4	5	6	7	8
No of Houses	34	650	310	42	12	2

Q.3 a) Calculate Mean Deviation from the median for the following series. 05

x	10	11	12	13	14
f	3	12	18	12	3

b) Calculate the Range and its coefficient for the following data: 05

C.I.	10-20	20-30	30-40	40-50	50-60
f	3	5	7	9	6

Q.4 Calculate Bowley's coefficient of Skewness. 10

C.I.	0-10	10-20	20-30	30-40	40-50	50-60	60-70
f	8	12	20	10	6	3	1

Q.5 a) Obtain the rank correlation coefficient between the variables x and y from the following pair of observed values. 05

x	50	55	65	50	55	60	50	65	70	75
y	110	110	115	125	140	115	130	120	115	160

b) Find the two regression lines from the following data. 05

x	11	7	9	5	8	6	10
y	16	14	12	11	15	14	17

Q.6 Calculate $P_{01}(L)$, $P_{01}(P)$, $P_{01}(D - B)$, $P_{01}(F)$ and $P_{01}(M - E)$ if **10**
 $\sum p_0 q_0 = 420$ $\sum p_1 q_0 = 690$ $\sum p_0 q_1 = 200$ $\sum p_1 q_1 = 335$

Q.7 a) Obtain the trend value using 3 yearly moving averages for the data **05**
 given below.

Year	1997	1998	1999	2000	2001	2002	2003	2004
No of bones (in 10,000)	20.5	19.7	21.3	24.1	25.2	22	22.5	24.1

b) Obtain the trend values using 4 yearly moving averages for the data **05**
 given below.

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
No of deaths	152	183	169	196	164	203	175	178	207

Q.8 a) **Match the Column:** **05**

Column A

- 1) Coefficient of correlation
- 2) Rank correlation coefficient
- 3) Coefficient of Skewness
- 4) Regression Analysis
- 5) Quartile

Column B

- a) Francis Galton
- b) John Wilder Tukey
- c) Karl Pearson's
- d) Spearman's
- e) Bowley's

b) **State the following formula's** **05**

- 1) Q.D.
- 2) Pearsonian Coefficient of skewness
- 3) Correlation coefficient
- 4) Combined Mean
- 5) Walsch's price index Number

Q.9 Write shorts notes (any 5): **25**

- a) Merits and Demerits of Median
- b) Properties of coefficient of correlation
- c) Characteristics of Index Number
- d) Concept of Kurtosis
- e) Ration to Moving Average Method
- f) Harmonic Mean
- g) Requisite of good averages