DCBD202

Reg. No. | | | | | | | | |

II Semester B.Com./(BDA) Degree Examination, June/July - 2025

COMMERCE

Business Statistics - II

(NEP Scheme)

Time : 2½ Hours **Maximum Marks : 60**

Instructions to Candidates:

Answers should be written in English only.

SECTION - A

Answer any Five of the following sub-questions. Each sub-question carries 2 marks. (5×2=10)

1. a. What is Probability?

b. What is One Tailed Test?

c. Mention two differences between Interpolation and Extrapolation.

d. Give the meaning of ANNOVA.

e. Mention any four uses of Regression.

f. What are the components of time-series?

g. What is Random Sampling?

SECTION - B

Answer any Four of the following questions. Each question carries 5 marks. (4×5=20)

2. Following are the Marks of Students in the Statistics and Econimocs in an annual examination.

	Statistics	Economics
Mean $(\bar{X})$	60	50
S.D (σ)	12	14
r	+0.4	

Find Two Regression Equations.

3. Calculate Five yearly Moving Average from the following data regarding the number of Industries in India.

Year:	2010	2011	2012	2013	2014	2015	2016
No. of Industries:	35	38	40	44	14	14	12

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4. Find the value of x^2 for the following data.

Group:	A	B	C	D	E
Observation frequency:	9	29	44	15	12
Theoritical frequency:	5	24	30	30	16

5. Explain in detail Type - I and Type - II Error.
6. Two coins are tossed simultaneously find the probability that
   a) Two heads b) One head
   c) No heads d) At least one head

SECTION - C

Answer any Two of the following questions. Each question carries 12 marks. (2×12=24)

7. Fit a straight line trend and estimate the production of steel for the year 2024 and plot the Trend values and Actual values on graph sheet.

Year	**Production**
2015	58
2016	60
2017	68
2018	62
2019	55
2020	51
2021	59
2022	54

8. From the following:

X:	65	67	66	67	68	69	71	73
Y:	67	68	64	68	72	70	69	70

   a) Obtain the two Regression Equation.
   b) Estimate the value of 'Y' when X = 675.
   c) Estimate the value of 'X' when Y = 70.
   d) Hence, find correlation co-efficient.

9. The following table given No. of breakdown in a factory in various days of a Week.

Day:	Mon	Tues	Wed	Thur	Fri	Sat	Sun
No. of breakdown:	14	22	16	18	12	19	11

Using Chi-Square test check whether breakdowns are uniformly distributed **or** not.

SECTION - D

Answer any One of the following question. Which carries 6 marks.

(1×6=6)

10. Explain in Detail the application of ANNOVA.
11. What is Sampling? Briefly explain its Methods.