

Faculty of Commerce
B.Com. II Year – IV Semester Examinations July / August - 2022
Business Statistics - II

Time: 3 Hrs

Marks: 75

SECTION- A

Answer any five questions

5 x 5 = 25 Marks

1. Regression Coefficient
2. Calculate Index Numbers for 2021 taking 2020 year as base as per Simple Aggregative Method:

Commodities	A	B	C	D	E
Price in 2020 in Rs.	20	30	42	25	30
Price in 2021 in Rs.	30	45	125	35	40

3. Weighted Moving Average
4. Probability
5. Find the Probability of getting Sum of eight when two dice are thrown at a time?
6. Seasonal Variations
7. If $\sum p_1q_1=1880$ $\sum p_0q_0=1360$ $\sum p_1q_0=1900$ $\sum p_0q_1=1344$. Find Index Number by Paasche's method
8. What is the probability of a getting a king or Spade if a card is drawn from the pack of Cards?

SECTION - B

Answer all questions

5 x 10 = 50 Marks

9. A) Explain the significance and limitations of Regression Analysis?
OR
B) Find Regression Equations and also Calculate the correlation coefficient:

X	18	19	20	21	22	23	24	25	26	27
Y	17	17	18	18	19	19	19	20	21	22

10. A) Define Index Numbers and Explain the methods of construction?
OR
B) Calculate Fishers Ideal Index from the following data and prove that it satisfies both Time Reversal Test and Factor Reversal Tests.

Commodity	2005		2015	
	Price	Quantity	Price	Quantity
A	12	50	20	60
B	4	100	5	110
C	8	60	12	70
D	20	30	24	40

11. A) Define Time Series. Write about the Components of Time Series.

OR

B) Fit a Straight line trend by the method of least squares to the following data and estimate sales in 2022:

Years	2014	2015	2016	2017	2018	2019	2020
Sales (in '000)	10	14	18	16	12	25	28

12. A) Explain the following concepts in Probability:

- i) Experiment iii) Mutually Exclusive Events
 ii) Independent Events iv) Equally Likely Events

OR

B) A Bag contains 8 Blue and 3 Yellow balls. Two balls are drawn at random. Find the probability that (i) Both are Blue (ii) Both are Yellow (iii) one is Blue and one is Yellow

13. A) Explain the properties of Normal Distribution?

OR

B) Fit a Binomial Distribution to the following data:

n	0	1	2	3	4
f	100	60	20	3	1