

**D-4825**

**Sub. Code**

**10432/12632/  
12232/13332/  
34732**

**DISTANCE EDUCATION**

**Common for B.B.A/B.B.A. (LE)/B.B.A. (Banking)/B.B.A.  
(Banking) (LE)/M.B.A. 5 Year Integrated DEGREE  
EXAMINATION, DEC 2020.**

**Third Semester**

**BUSINESS STATISTICS**

**(CBCS 2018 – 2019 Academic Year Onwards)**

**Time : Three hours**

**Maximum : 75 marks**

**PART A — (10 × 2 = 20 marks)**

**Answer ALL questions.**

1. Define statistics.
2. Give example for individual series, discrete series and continuous series.
3. What is meant by time series?
4. What is meant by stratified sampling?
5. What do you understand by addition theorem in probability?

6. What is meant by unbiased error?
7. What is purpose of Chi-square test?
8. What is correlation?
9. What is Kurtosis?
10. What is an index number?

PART B — (5 × 5 = 25 marks)

Answer ALL the questions choosing either (a) or (b).

11. (a) Explain the uses of Tabulation.

Or

- (b) Distinguish between primary and secondary data.

12. (a) Differentiate mean deviation from standard deviation.

Or

- (b) Calculate average marks of the students from the following data :

Marks :	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of students :	15	20	25	24	12	31	71	52

13. (a) If the value of  $X = 0.85y$ ,  $Y = 0.89x$ ,  $\sigma_x = 3$ , find the value of  $\sigma_y$  and  $r$ .

Or

- (b) Calculate Karl Pearson's co-efficient of skewness.

$x$ : 0 1 2 3 4 5 6 7

$f$ : 12 27 29 19 8 4 1 0

14. (a) What are the uses of time series?

Or

- (b) Explain the procedure of selecting 20 houses from your locality by random number method.

15. (a) Explain Bayes theorem of probability.

Or

- (b) A bag contains 5 white and 3 black balls. Two balls are drawn at random one after other without replacement. Find the probability that both the balls drawn are black.

PART C — ( $3 \times 10 = 30$  marks)

Answer any THREE questions.

16. Describe the characteristics merits and demerits of statistics.
17. Find out mean, median and mode from the data given below :

<i>X</i> :	410-419	420-429	430-439	440-449	450-459	460-469	470-479
<i>F</i> :	14	20	42	54	45	18	7

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18. From the following particulars calculate :

(a) Laspeyre's

(b) Pasche's and

(c) Fisher's index.

Commodity	1980		1984	
	Price	Quantity	Price	Quantity
A	10	4	20	2
B	5	8	8	6
C	7	5	10	4
D	8	6	6	8
E	20	2	11	5

19. Fit a straight the trend by the method of least squares to the following data :

Year :	1991	1992	1993	1994	1995	1996
Production (tones) :	24	25	29	26	22	24

20. Explain the addition and multiplication theorems of probability.
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