

**Bc/BC/C5**



**2025**  
( FYUGP )  
( 3rd Semester )

**COMMERCE**  
( MAJOR )

Paper Code : BC/C5

( **Business Statistics** )

Full Marks : 75  
Pass Marks : 40%

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. (a) Define statistics. Discuss the stages of statistical investigation. 3+12=15

*Or*

- (b) What do you mean by diagrammatic representation? Explain the different types of diagrams used in statistics. 3+12=15

( 2 )

2. (a) What is meant by measures of central tendency? Differentiate between mean, median and mode. 3+12=15

Or

- (b) Calculate the standard deviation and its coefficient from the following frequency : 15

Marks	No. of students
0-10	5
10-20	12
20-30	30
30-40	45
40-50	50
50-60	37
60-70	21

3. (a) What is correlation analysis? Explain the significance of studying correlation. What are the types of correlation? 2+5+8=15

Or

- (b) A company wanted to assess the impact of expenditure (X) on annual profit (Y) :

X	5	10	12	13	20	18
Y	20	25	30	40	60	47

Calculate the two regression lines and estimate the profit for an expenditure of ₹ 30 crore. 15

( 3 )

4. (a) Calculate the price index number for the year 2024 with 2022 as base by using (i) Laspeyres' method, (ii) Paasche's method, (iii) Marshall-Edgeworth's method and (iv) Fisher's ideal index method : 15

Commodity	Unit	2022		2024	
		Price	Quantity	Price	Quantity
Wheat	Kg	10	3	14	4
Milk	Litre	15	4	16	4
Rice	Quintal	12	6	18	7
Fish	Kg	20	2	25	3
Sugar	Kg	10	3	12	4

Or

- (b) What are the importances of time series analysis? Explain in brief the various components of time series analysis.

7+8=15

5. (a) Define probability. Explain the approach and importance of probability.

2+13=15

Or

- (b) An urn contains 8 white and 3 red balls. If two balls are drawn at random, find the probability that (i) both are white, (ii) both are red, (iii) one is white and the other is red.

15

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