

# FIRST YEAR B.Com. DEGREE EXAMINATION, MARCH/APRIL 2001

## Part III—Commerce

### Paper II—BUSINESS STATISTICS

(New Scheme)

Three Hours

Maximum : 100 Marks

Answers may be written either in English or in Malayalam.

#### Part A

Answer any ten questions.

Each question carries 2 marks.

What is statistical method ?

What do you mean by secondary data ?

What is systematic sampling ?

What do you mean by histogram ?

Write down the formula for finding out median of a continuous series.

What are the purpose of finding of variation ?

What is Lorenz curve ?

What does skewness mean ?

What do you mean by linear correlation ?

If  $r = 0.6$ ,  $\delta_x = 4$ ,  $b_{xy} = 0.8$  find out  $\delta_y$ .

What do you mean by shifting the base ?

What is time series analysis ?

(10 × 2 = 20 marks)

#### Part B

Answer any ten questions.

State the limitations of statistics.

What the precautions in the use of secondary data ?

Discuss the merits and limitations of probability sampling.

What are advantages and disadvantages of Arithmetic mean.

Differentiate between Interpolation and Extrapolation and discuss their significance.

Discuss the utility of consumer price indices.

State the significance of regression analysis in business decision making.

From the following observations prepare a classified frequency distribution :—

110	108	126	132	149	136	125	112
138	155	125	138	136	130	120	148
140	125	119	111	154	147	165	137
145	132	150	137	142	135	125	126

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21. An aeroplane covers the four sides of a square at speeds of 1000, 2000, 3000 and 4000 respectively. What is the average speed of the plane in its flight around the square?

22. Compute coefficient of quartile deviation from the following data :—

Marks	:	10	20	30	40	50	80
No. of students	:	4	7	15	8	7	2

23. Find the rank correlation coefficient for the following distribution :—

Marks in Statistics	:	48	60	72	62	56	40	39	52	30
Marks in Accountancy	:	62	78	65	70	38	54	60	32	31

24. From the following data compute a quantity index :—

Commodity	Quantity		Price 1999
	1999	2000	
A ...	30	25	30
B ...	20	30	40
C ...	10	15	20

(10 × 5 = 50)

### Part C

Answer any two questions.

Each question carries 15 marks.

25. What is Index Number? What are its uses? Discuss the problems in construction in Index Number.

26. Fit a straight line by least square method and tabulate the trend values from the following data of production of a sugar factory :—

Year	:	1994	1995	1996	1997	1998	1999	2000
Production	:	77	88	94	85	91	98	90

(in '000 tonnes)

27. The mean and standard deviation of 200 items are found to be 60 and 20 respectively. If at the time of calculation, two items were wrongly taken as 3 and 67 instead of 13 and 17, find the correct mean and standard deviation. What is the correct coefficient of variation?

(2 × 15 = 30 marks)