FINAL YEAR B.Com. DEGREE EXAMINATION, AUGUST 2009

Part III—Commerce

Paper I—BUSINESS STATISTICS

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer any **ten** questions.*
Each question carries 1 mark.

1. What is Kurtosis ?

2. What do you mean by splicing of index numbers ?

3. What is random sampling ?

4. Define statistics as a method.

5. What do you mean by frequency polygon ?

6. What do you mean by quartiles ?

7. Define geometric mean.

8. Define time series.

9. What do you mean by conditional probability ?

10. What do you mean by regression analysis ?

11. What is meant by classification ?

12. If the mean and median of a moderately asymmetrical series are 26.8 and 27.9 respectively, what would be its most probable mode ?

(10 × 1 = 10 marks)

Part B

*Answer any **ten** questions.*
Each question carries 4 marks.

13. Distinguish between positive and negative skewness.

14. Explain the important parts of a table.

15. Explain the functions of statistics.

16. Explain the components of time series.

17. What are the mathematical properties of geometric mean ?

18. What is an index number ? Explain its uses.

19. The price of a commodity increased by 5 % from 2003 to 2004 by 8 % from 2004 to 2005, 77 % from 2005 to 2006. Find the average rate of change.

20. Draw a histogram from the following data :—

Mid value : 15 25 35 45 55 65 75

Frequency : 10 24 40 32 20 14 4

21. A market with 168 operating firms has the following distribution of average number of work various income groups :

Income groups :	150-300	300-500	500-800	800-1200	1200-1800
No. of firms :	40	32	26	28	42
Average no. of workers :	8	12	7.5	8.5	4

Find the average salary paid in the whole market.

22. Calculate Standard Deviation of the following data :—

Age (years) under	10	20	30	40	50	60	70	80
No. of persons dying	15	30	53	75	100	110	115	125

23. A bag contains 10 white and 6 black balls. 4 balls are successively drawn out and not What is the probability that they are alternatively of different colours ?

24. Compute by suitable method the quantity index number from the given data :—

	2001		2002	
Commodities	Price	Value	Price	Value
A ...	8	80	10	110
B ...	10	90	12	108
C ...	16	256	20	340

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Part C

Answer any **two** *questions.*
Each question carries 15 marks.

25. Explain the meaning and significance of Correlation Analysis. Does it always s effect relationship between two variables ?

26. Calculate Fisher's Ideal Index Number from the following data and show that it satisfies Time Reversal Test and Factor Reversal Test.

	1999		2000	
Commodity	Price (Rs.)	Quantity	Price (Rs.)	Quantity
A ...	10	49	12	50
B ...	12	25	15	20
C ...	18	10	20	12
D ...	20	5	40	2

27. Below are given the figures of production of a sugar factory :

Year	Production (in thousand quintals)	Year	Production (in thousand quintals)
1995	77	2000	91
1997	88	2001	98
1998	94	2004	90
1999	85		

(i) Fit a straight line trend by the "Least Squares Method" and tabulate the trend values.

(ii) What is the monthly increase in the production of sugar ?

(2 × 15 = 30 marks)