

B.B.A. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2012**First Semester****Complementary Course—FUNDAMENTALS OF BUSINESS STATISTICS**

Time : Three Hours

Maximum Weight : 25

Part A*Answer all questions.**Each bunch of four questions carries a weight of 1.***Bunch I**

1. The process of obtaining information about an entire population by examining only a part of it is called _____.
2. The spread or scatter of values in a series is called _____.
3. _____ is an algebraic method of measuring correlation.
4. The straight line trend that can be fitted to the data by method of curve fitting based on principle of least squares is known as _____.

Bunch II

5. The _____ of a series is the size of that item of the series which occupies the central position of the series when items are arranged in ascending or descending order.
6. _____ tells us the extent to which the values of a series differ between each other or from their average.
7. The square root of the mean of the squares of the deviations of all values of a series from their arithmetic mean is called _____.
8. The difference between first and third quartile is _____.

Bunch III

9. A _____ is a projection of past patterns into the future.
10. Change of _____ does not affect the regression coefficient.
11. Coefficient of correlation is between _____ and _____.
12. An association between two variables that is described by a curved line is a _____.

Bunch IV

13. Smoothed frequency curves drawn for cumulative series are called _____.
14. Equation for linear curve is _____.
15. The symbol ' μ ' denotes _____.
16. Sum of deviations of the items from the _____ is always zero.

 $(4 \times 1 = 4)$ **Turn over**

Part B

*Answer any five questions.
Each question carries a weight of 1.*

17. Define simple random sampling.
18. What do you mean by quartile deviation ?
19. Find the median of the following values :—
4, 45, 60, 20, 83, 19, 26, 11, 27, 12, 52.
20. What is skewness ?
21. What do you mean by probable error ?
22. Calculate geometric mean of :
1.05, 1.08, 2.01, 3.05, 4.01.
23. What does coefficient of correlation intend to measure ?
24. What are moving averages ?

(5 × 1 = 5)

Part C

*Answer any four questions.
Each question carries a weight of 2.*

25. Find the coefficient of correlation from the following data :—

x	:	2	3	4	5	6	7	8
y	:	4	5	6	8	9	7	10

26. Calculate Pearson's coefficient of skewness from the data :

Marks	:	45—50	51—56	57—62	63—68
Frequency	:	12	17	22	18

27. Represent the following data by histogram :

Marks in English	:	0—10	10—20	20—30	30—40	40—50
No. of students	:	3	20	20	15	6

28. Find mode :

Size	:	3	8	10	12	15	20	25	30
Frequency	:	2	7	15	27	12	4	3	2

29. Calculate median :

Marks (less than)	:	15	30	45	60	75	90
No. of students	:	18	35	62	81	95	100

30. Draw the two ogives for the following data on the same graph paper :

Marks	:	10—19	20—29	30—39	40—49	50—59
No. of students	:	5	10	18	12	5

(4 × 2 = 8)

Part D

Answer any two questions.

Each question carries a weight of 4.

31. Given below are the figures of production (in thousand tons) of a sugar factory :

Year	:	2002	2003	2004	2005	2006	2007	2008
Production	:	77	88	94	85	91	98	90

Fit straight line by the method of least squares and find the trend values. Also, eliminate the trend.

32. From the prices of shares of X and Y find out which is more stable :

X	:	35	54	52	53	56	58	52	50	51
Y	:	107	108	107	105	105	106	109	112	114

33. Establish correlation between the following pair of series and find out the probable error. Also interpret :

X	:	17	19	20	22	24	27	29	30	33	35
Y	:	87	85	80	78	75	72	70	65	62	60

(2 × 4 = 8)