

E 2629

(Pages : 3)

Reg. No.....

Name.....

B.B.A. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2011

First Semester

Complementary Course—FUNDAMENTALS OF BUSINESS STATISTICS

Time : Three Hours

Maximum Weight : 25

Part A

*Answer all questions in this part.
Each bunch of 4 questions carries weight 1.*

Bunch I

1. Sum of the deviations of the items from the _____ is always zero.
2. Regression Coefficients are not independent of change of _____.
3. Equation for linear curve is _____.
4. Before finalising a questionnaire _____ is done.

Bunch II

5. Head note is given along with the _____.
6. The Empirical relationship between Mean, Median and Mode is = _____.
7. Graphical method of showing deviation from the average of a group of data is called _____.
8. Statistics can be best be considered as _____.

Bunch III

9. If ' r ' is more than six times _____ it is called significant.
10. Quartile deviation = _____.
11. A normal distribution is _____ shaped.
12. Limits of Correlation is _____ to _____.

Bunch IV

13. When one regression Coefficient is negative the other would be _____.
14. Forces of rhythmic nature cause _____.
15. The additive model of a time series is expressed as _____.
16. When population under investigation is infinite, we should use the _____.

(4 × 1 = 4)

Part B

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

17. What is a quartile ?
18. What is economic time series ?

Turn over

19. What are the various methods of measuring trend values ?
20. In a skewed distribution the values of mode and mean are 32 and 35 respectively. Find the median.
21. Calculate range and Co-efficient of range from the following distribution :
- | | | | | | | |
|-----------|---|----------|-------|-------|-------|----------|
| Income | : | Below 10 | 10—20 | 20—30 | 30—40 | above 40 |
| Frequency | : | 7 | 8 | 15 | 7 | 3 |
22. What do you mean by Partial Correlation ?
23. Define Variance.
24. What is Spurious Correlation ?

(5 × 1 = 5)

Part C

*Answer any four questions in this part.
Each question carries weight 2.*

25. Distinguish between absolute and relative dispersion.
26. Write note on the following : Positive and Negative Correlation.
27. Draw a Frequency polygon after constructing a histogram.
- | | | | | | | |
|-----------|---|-------|-------|-------|-------|-------|
| Class | : | 10—20 | 20—30 | 30—40 | 40—50 | 50—60 |
| Frequency | : | 12 | 18 | 25 | 16 | 10 |
28. Following are the daily wages of ten workers of a firm :
120, 130, 140, 110, 160, 150, 190, 180, 170, 200. Find Median and fifth decile.
29. Draw a trend line by the method of Semi-averages from the following data :
- | | | | | | | | | |
|-------------------------------|---|------|------|------|------|------|------|------|
| Year | : | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| Production
(in '000 units) | : | 102 | 105 | 114 | 110 | 108 | 116 | 112 |
30. What is the purpose of analysing seasonal variation in business problem ?

(4 × 2 = 8)

Part D

*Answer any two questions.
Each question carries weight 4.*

31. Fit a straight line trend for the following series. Estimate the value for 1987.
- | | | | | | | | | |
|---------------------------|---|------|------|------|------|------|------|------|
| Year | : | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 |
| Production
(in tonnes) | : | 60 | 72 | 75 | 65 | 80 | 85 | 95 |

32. You are given the following information about advertising and sales :

		Adv. exp : (X)	Sales (Y)
		(Rs. Cr.)	(Rs. Cr.)
Mean	...	20	100
S.D.	...	5	12

$r = 0.8$.

- (a) Calculate the two regression lines.
 (b) Find the likely sales when advertisement expenditure is Rs. 25.
33. Draw Ogives and then find median graphically. Check the answer by applying interpolation formula.

Marks	:	0—10	10—20	20—30	30—40	40—50	50—60	60—70
No. of Students :		5	4	8	12	16	25	10

(2 × 4 = 8)