

E 6975

(Pages : 3)

Reg. No.....

Name.....

B.B.A. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2013

First Semester

Complementary Course—FUNDAMENTALS OF BUSINESS STATISTICS

(2013 Admissions)

Time : Three Hours

Maximum : 80 Marks

Part A

*Answer all questions.
Each question carries 1 mark.*

1. What is Non-sampling error ?
2. If Mean = 100 and S.D. = 15 find coefficient of variation ?
3. Define Census method.
4. What is frequency curve ?
5. What do you mean by standard error ?
6. The mean of 5 items is 30. Four values are 10, 15, 30 and 35. Find the fifth value.
7. Where will the regression Lines meet ?
8. Can cyclic and irregular variations be measured ?
9. What do you mean by seasonal variations ?
10. Define Rank correlation ?

(10 × 1 = 10)

Part B

*Answer any eight questions.
Each question carries 2 marks.*

11. Explain the scope of statistics.
12. Distinguish between Census and Sampling method.
13. Explain the uses of graphs and diagrams.
14. Draw a Histogram :

Midvalue	...	15	25	35	45	55	65	75
Frequency	...	10	24	40	32	20	14	4

Turn over

15. What are the uses of correlation ?
16. Explain the limitations of regression.
17. Find the straight line trend to the following series by the method of Least squares :

Year	...	2001	2002	2003	2004	2005	2006	2007
Production of steel	...	10	13	12	14	12	16	14

Estimate the most likely estimated production for the year 2009.

18. Why is standard deviation considered to be the best measure of dispersion ?
19. Find Range and coefficient of range

43, 25, 18, 29, 20, 9, 52, 69, 71, 50.

20. Distinguish between seasonal movements and secular trend.

21. Find Mean deviation about mean of the following :

No. of children	...	0	1	2	3	4	5	6
No. of families	...	171	82	50	25	13	7	2

22. Explain Scatter diagram.

(8 × 2 = 16)

Part C

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

23. What are the sampling and non-sampling errors.
24. Explain various methods to select a sample.
25. What are the desirable properties of good average.
26. Find the regression line of X on Y

X	...	2	4	6	8	10
Y	...	5	7	9	8	11

27. Explain different types of correlation.
28. Find the Rank Correlation coefficient whose ranks are given below :

A	...	3	5	8	4	7	10	1	2	9	6
B	...	9	8	6	4	1	2	3	10	5	7

29. Find Mean, Median and Mode :

Size	...	0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12
Frequency	...	2	4	6	4	2	6

30. Find the coefficient of variation :

Age	...	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
No. of persons	...	15	30	53	75	100	110	115	125

31. Calculate the coefficient of correlation between X and Y and the mean value of X and Y (\bar{X} , \bar{Y}) for the following data. Variance of X = 9 regression equations $2x + 3y - 70 = 0$, $3x + 2y - 80 = 0$.

(6 × 4 = 24)

Part D

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

32. Draw ogives of the following and hence find Median from ogives :

Variables	...	10 – 15	15 – 20	20 – 25	25 – 30	30 – 35
Frequency	...	5	20	47	38	10

33. Below are given the figures of production (in thousand tons) of a sugar factory :

Year	...	2005	2006	2007	2008	2009	2010	2011
Production	...	77	88	94	85	91	98	90

- Fit a straight line by the method of least squares and find the trend values.
- What is the monthly increase in production ?
- Estimate trend.

34. (a) Distinguish between primary and secondary data.

(b) Explain different stages in statistical enquiry.

(c) How is statistics misused ?

35. (a) What are the different types of tabulation ?

(b) Distinguish between tabulation and classification.

(c) What are the different parts of a table ?

(2 × 15 = 30)