

E 7942

(Pages : 3)

Reg. No. 160021101065

Name. Aiswarya

B.B.A. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2017

First Semester

Complementary Course—FUNDAMENTALS OF BUSINESS STATISTICS

(2013 to 2016 Admissions)

Time : Three Hours

Maximum Marks : 80

Part A

Answer all questions.

Each question carries 1 mark.

1. What is Statistics ?
2. Define a Statistical unit.
3. What do you mean by secondary data ?
4. Define median.
5. Define mean deviation.
6. What is Lorenz curve ?
7. Define correlation.
8. What is time series ?
9. What do you mean by Histogram ?
10. Define the term 'Questionnaire'.

(10 × 1 = 10)

Part B

Answer any eight questions.

Each question carries 2 marks.

11. Mention the important limitations of statistics.
12. What is meant by tabulation ?
13. Distinguish between Population and Sample.
14. What is meant by Law of Inertia of Large Numbers ?

Turn over

15. There were 500 workers working in a factory. Their mean wages was calculated as Rs. 200. Later on it was discovered that the wages of two workers were misread as Rs. 180 and Rs. 20 in place of Rs. 80 and Rs. 220. Find the correct average.
16. Define mode. Point out two situations where mode is a good average.
17. Explain geometric mean.
18. What are the components of time series ?
19. What is Regression Analysis ?
20. Define Rank correlation and mention its special features.
21. Calculate Karl Pearson's correlation coefficient between X and Y from the following data :

$$N = 10 \quad \sum X = 35 \quad \sum X^2 = 203$$

$$\sum Y = 28 \quad \sum Y^2 = 140 \quad \sum XY = 168.$$
22. What are the bases of classifications of data ?

(8 × 2 = 16)

Part C

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

23. Explain the role of statistics in the field of business and commerce.
24. What are the desirable properties of a good measure of dispersion ?
25. An aeroplane travels distances of 2500, 1200 and 500 Kms at speeds 500, 400 and 250 Kms per hour respectively. Find the average speed for the entire trip.
26. Calculate the standard deviation of the following distribution :

Age	:	20-25	25-30	30-35	35-40	40-45	45-50
No. of persons	:	170	110	80	45	40	35
27. What are the characteristics of an ideal average ?
28. Describe the different methods adopted for the measurement of secular trend.

29. The ranks of 6 persons before and after a training course are as follows :

Persons	:	A	B	C	D	E	F
Rank Before	:	3	5	4	2	1	6
Rank After	:	4	6	5	2	1	3

Compute Spearman's rank correlation.

30. Calculate the co-efficient of Quartile Deviation from the following distribution of marks obtained in a public service examination :

Marks	:	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	:	3	9	12	20	8	6	6	5

31. Give short notes on :

- (i) Ogive.
- (ii) Rates and Ratios.
- (iii) Scaling.
- (iv) False Base Line.

(6 × 4 = 24)

Part D

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

32. What are the different methods of collecting primary data ? State their merits and demerits.
33. Discuss the meaning, utility and limitations of diagrammatic representation of statistical data.
34. Calculate mean, median and mode from the following distribution :

Class	:	5-9	10-14	15-19	20-24	25-29	30-34	35-39
Frequency	:	8	12	23	12	7	5	3

35. A panel of two judges P and Q graded seven dramatic performances by independently awarding marks as follows :

Performance	:	1	2	3	4	5	6	7
Marks by P	:	46	42	44	40	43	41	45
Marks by Q	:	40	38	36	35	39	37	41

The eighth performance which judge Q could not attend, was awarded 37 marks by judge P. If judge Q had also been present, how many marks could be expected to have been awarded by him to the eighth performance.

(2 × 15 = 30)