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Reg. No.....

Name.....

B.Com. DEGREE (C.B.C.S.S.) EXAMINATION, SEPTEMBER 2024

First Semester

Core 1—BUSINESS STATISTICS

(Common for Model I, Model II and For U.G.C.Sponsored B.Com. Degree Programmes. [2013 to 2016 Admissions]

Time : Three Hours Maximum Marks : 80

Part A

Answer **all** *questions.*

Each question carries 1 *mark.*

1. Describe the importance of Statistics.
2. State any *two* limitations of statistics.
3. Give the perception of Inter Quartile Range.
4. What do you mean by co-efficient of variation ?
5. How Price Index differ from Quantity Index?
6. Specify the uses of Cost of Living Index.
7. Narrate the components of time series.
8. Expound the scope of Moving Averages in a business.
9. Elucidate the role of base year in the construction of Index Number.
10. Clarify the necessity of diagrams in statistics.

(10 × 1 = 10 marks)

Part B

Answer any **eight** *questions.*

Each question carries 2 *marks.*

11. Narrate the main components of Time Series.
12. Explain the functions of Statistics.

Turn over

13. Distinguish between Questionnaire and Interview schedule.

14. Describe the essential requisite of a good average.

15. Why Fishers is said to be ideal ?

16. How positive co-ordination differ from negative co-ordination ?

17. How will you determine the Harmonic Mean and Geometric Mean ?

18. What things to be considered while constructing tables ?

19. A factory has five sections employing 105,184, 130, 93, and 24 workers.

    The mean earnings in a certain week per workers are

    Rs. 13.84, Rs. 15.12, Rs. 15.27, Rs. 18, 19, and Rs. 14,22 for five sections.

    Determine the mean earnings per worker of the whole factory.

20. A manager while inspecting his departments found the number of absentees in 10 departments as follows :

    21, 12, 15, 17, 18, 19, 20, 19, 0, 6.

    Calculate the first and third quartile.

21. A machine is assumed to depreciate 40 % in value in the first year, 25 % in the second year and 10 % per annum for the next three years .each percentage being calculated on the diminishing value What is the average percentage depreciation for five years ?

22. Calculate the Harmonic Mean from the following data.

    2, 574, 475, 75, 5, .8, .08, 005, 0009.

(8 × 2 = 16)

Part C

Answer any **six** *questions.*

Each question carries 4 *marks.*

23. "Planning without statistics is a ship without rudder and compass". In the light of this statement discuss the importance of statistics as an effective aid to National planning in India.

24. "Each type of average has its own particular field of usefulness". In the light of this statement discuss characteristics features of mean, median and mode in statistics.

25. Explain the term Dispersion. Give the objectives of measurement of dispersion .What are the various methods of measuring Dispersion ?

26. How Index numbers are prepared ? Explain the importance of the base year and weights in the construction of cost of living index.

27. The following are the marks obtained by B.Com students, find the mode :

2, 0, 9, 15, 11, 17, 19, 21, 25, 26, 23, 22, 27, 28, 35, 45, 32, 33, 31, 34.

28. From the following frequency distribution find out mean height of the students :

Height (Inch.)	:	64	65	66	67	68	69	70	71	72	73
No of Students	:	1	6	10	22	21	17	14	5	3	1

29. Find out the Karl Pearson's co-efficient of skewness from the following data :

Size of Item	:	7.4	8,4	9.4	10.4	11.4	12.4	13.4
Frequency	:	2	6	20	14	8	6	4

30. Find out Range and its co-efficient of the following data :

Year	:	2014	2015	2016	2017	2018	2019	2020
Profit	:	100	160	150	220	300	190	200

31. Calculate Geometric Mean of the following items :

3834, 382, 63, 8, 0.4, 0.03, 0.009, 0.0005.

(6 × 4 = 24)

Part D

Answer any **two** *questions.*

Each question carries 15 *marks.*

32. Calculate Mean, Standard deviation and its Co-efficient from the following data :

Income (Rs.) Per Day	:	100 - 200	100 - 300	100 - 400	100 - 500	100 - 600
No of Persons	:	15	33	63	83	100

Turn over

33. Find Median from the following Data :

Mid-Value	:	5	15	25	35	45	55
Frequency	:	4	6	10	7	3	2

34. Calculate the trend values by the least squares from the following data given below :

Year	:	2015	2016	2017	2018	2019	2020	2021
Values	:	75	67	68	65	50	54	41

35. From the following data, calculate quantity Index number using : (a) Laspeyres Formula ; (b) Paasches Formula ; and (c) Fishers Formula :

Items	*Base Year*		*Current year*	
	Price (Rs.)	*Quantity* (Kg.)	*Price* (Rs.)	*Quantity* (Kg.)
A	5	50	10	56
B	3	100	4	120
C	4	60	6	60
D	11	30	14	24
E	7	40	10	36

(2 × 15 = 30)