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THIRUVANANTHAPURAM

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G – 4118

Reg. No. : .....

Name : .....

Fourth Semester B.Com. Degree Examination, July 2019

First Degree Programme under CBCSS

Complementary Course : CO 1431/CX 1431/CC 1431

BUSINESS STATISTICS

(Common for Commerce/Commerce and Tax Procedure and Practice/Commerce with Computer Application)

(2014 Adm onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions in one or two sentences each. **Each** question carries **1** mark.

1. What is mean by histogram?
2. Define average.
3. What is mean by dispersion?
4. Describe method of least square.
5. What is the relevance of mode as a measure of central tendency?
6. What is mean by cost of living index?
7. Describe time reversal test.
8. What is mean by Fishers ideal index?
9. How will you construct multiple bar diagram?
10. Describe interpolation.

(10 × 1 = 10 Marks)

P.T.O.

SECTION - B

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

11. What is mean by regression?

12. What is mean by law of inertia of large numbers?

13. What are the different types of bar diagrams?

14. Why sensus method is more reliable than sampling?

15. What are the positional averages?.

16. Why arithmetic mean is considered as good measure of central tendency?

17. Distinguish between absolute measure of dispersion and relative measure of dispersion?

18. Explain the essential characteristics of an ideal measure of dispersion.

19. What are the limitations of index numbers?

20. How will you compute harmonic mean?

21. What is mean by seasonal variation?

22. What are the mathematical properties of median?

(8 × 2 = 16 Marks)

SECTION – C

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

23. Explain quartile range and semi-inter quartile range.

24. Explain the procedure of mode.

25. When weighted average is useful?

26. Calculate range and co-efficient of range from the following distribution :

Grade :	below 10	10-30	30-60	60-100	above 100
Frequency :	7	8	20	5	10

27. Distinguish between mean and mode.

28. Blood serum cholesterols levels of 10 persons are given below.

220, 230, 240, 250, 260, 270, 280, 255, 265, 290.

Find SD and CV.

29. Explain different components of time series.

30. Explain methods of measurement of trend.

31. Explain the utilities of time series analysis.

(6 × 4 = 24 Marks)

SECTION – D

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

32. What are the measures of simple correlation?

33. Fit a straight line trend by the method of least square to the following data relating to the number of foreign tourists visited at Munnar Tourist Centre between 2012 and 2018.

Also obtain trend values.

Year :	2012	2013	2014	2015	2016	2017	2018
No.of tourists :	300	700	600	800	900	700	1000

Estimate the number of tourists expected to visit in 2019.

34. From the following data calculate Fisher's Ideal index number and also test whether it satisfies both time reversal and factor reversal tests. Take 2000 as the base year.

Commodity	2000		2006	
	Price	Expenditure	Price	Expenditure
L	6	30	12	84
M	7	49	11	66
N	10	80	15	75
O	4	20	10	60

35. Calculate two regression equations by using Karl Pearson's co-efficient of correlation and standard deviations for sales and profits as given below. Estimate profits when sales Increase to Rs 42 lakhs and Rs 45 Lakhs.

Sales in Rs. Lakhs A	5	10	15	20	25	30	35
Profits in Rs. "000" B	6	8	12	14	16	18	20

(2 × 15 = 30 Marks)
