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Reg. No.....

Name.....

B.A. DEGREE (C.B.C.S.) EXAMINATION, JUNE 2018

Second Semester

B.A. Corporate Economics (Model III)

Core Course – EC 2CRT 05 – ELEMENTARY STATISTICS FOR ECONOMISTS – II

(2017 Admission onwards)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer any ten questions.

Each question carries 2 marks.

1. State any *two* characteristics of a good sample.
2. What do you mean by simple random sampling?
3. Write a short note on cluster sampling.
4. Define the term Correlation.
5. Write a short note on Karl Pearson's co-efficient of correlation.
6. What are regression co-efficients?
7. What are Price Index Numbers?
8. Write a brief note on Factor Reversal Test.
9. What is link index?
10. What are irregular variations?
11. Explain the ratio of moving average method.
12. Define rank correlations.

(10 × 2 = 20 marks)

Part B

Answer any six questions.

Each question carries 5 marks.

13. Briefly explain the characteristics of Sample design.
14. What is meant by Stratified Sampling? What are its advantages?
15. Explain Linear and Non-Linear correlation.
16. What are the essential qualities of an ideal index numbers?
17. Define Trend. What are the various methods of measuring it?

Turn over

18. Calculate Karl Pearson's correlation co-efficient between x and y from the following data :

$$n = 10, \Sigma x = 36, \Sigma x^2 = 203, \Sigma y = 28, \Sigma y^2 = 140 \text{ and } \Sigma xy = 168.$$

19. From the following data, find the regression equation of x on y :

$$x : 5 \quad 6 \quad 7 \quad 3 \quad 2$$

$$y : 4 \quad 5 \quad 8 \quad 2 \quad 1$$

20. From the fixed base index numbers given below prepare chain base index numbers :

$$\text{Year} : 2010 \quad 2011 \quad 2012 \quad 2013 \quad 2014$$

$$\text{Index} : 267 \quad 275 \quad 280 \quad 290 \quad 320$$

21. Compute Seasonal indices by the method of average from the following data :

Year	I	II	III	IV
2010	75	60	54	59
2011	86	65	63	80
2012	90	72	66	85
2013	100	78	72	93

(6 × 5 = 30 marks)

Part C

Answer any **two** questions.

Each question carries 15 marks.

22. The following data shows the maximum and minimum temperature on a certain day at 10 important cities throughout India.

$$\text{Max. Temperature} : 29 \quad 23 \quad 25 \quad 15 \quad 27 \quad 29 \quad 24 \quad 31 \quad 32 \quad 35$$

$$\text{Min. Temperature} : 8 \quad 3 \quad 7 \quad 5 \quad 8 \quad 19 \quad 10 \quad 7 \quad 5 \quad 8$$

- (a) Fit regression lines on x on y and y on x .
- (b) Estimate the Max. Temperature when the Min. Temperature is 12.
23. The ranks of 11 students in two sets are given below. Calculate the coefficient of correlation by the method rank differences :

$$\text{Test I} : 80, 45, 55, 58, 55, 60, 45, 68, 70, 45, 85$$

$$\text{Test II} : 82, 56, 50, 43, 56, 62, 64, 65, 70, 64, 90$$

24. Calculate Fisher's ideal index number and test whether it satisfies Time Reversal Test and Factor Reversal Test :

<i>Commodity</i>	2015		2016	
	Price	Qty.	Price	Qty.
A	12	75	30	90
B	3	22.5	9	15
C	1.5	30	3	37.5
D	3	15	7.5	12
E	1.5	60	4.5	45

25. Why is sampling necessary in many statistical enquiries?

(2 × 15 = 30 marks)