M 8825

Reg. No. : ....

Name : ....

II Semester B.Com. Degree (CCSS – 2014 Admn. – Regular) Examination, May 2015
COMPLEMENTARY COURSE IN COMMERCE
2C02 COM : Quantitative Techniques For Business Decisions

Time : 3 Hours   Max. Marks : 40

PART – A

Answer **all** questions, **each** carries $1/2$ marks.

1. Correlation indicates the relationship between
   a) Variable   b) Two variable
   c) Three variables   d) None of these

2. Regression analysis for studying more than two variables at a time is known as _____
   a) Simple regression   b) Single regression
   c) Multiple regression   d) None of these

3. 3% of a given lot of manufactured parts are defective, what is the probability that in a sample of four items none will be defective
   a) $(.97)^4$ b) 97^4 c) $(.87)^4$ d) None of these

4. Business cycles and trade cycles
   a) seasonal variation   b) cyclic variation
   c) Irregular fluctuations   d) None of these $(1/2 \times 4 = 2)$

PART – B

Answer **four** questions, **each** carries **1** mark.

5. State two limitations of Trend Free Hand curve method.

6. What is Radons experiments ?

P.T.O.

7. What is the probability of getting 3 white balls in a draw of 3 balls from a box containing 5 white and 4 black balls ?

8. In the study of regression equations, following values were obtained. Regression coefficient of y on x = .25, r = .42, S. D of y = 4, find S. D of x.

9. Define probability.

10. Write notes on Binomial Distribution.

11. Distinguish between cyclic and seasonal fluctuations.   (4×1=4)

PART – C

Answer **any six** questions **each** carrying **3** marks **not** exceeding **one** page.

12. List out the components of a time series.

13. Coefficient of correlation between two variates X and Y is 0.48. Their covariation is 36. The variance of X = 16. Find the standard deviation of Y series.

14. Explain usefulness of the study of regression.

15. There are 17 balls numbered from 1 to 17 in a bag. If a person selects one at random what is the probability that the number printed on the ball be an even number greater than 9 ?

16. Given the equation :

    $Y = 10(1.5)^x$, (Origin : 2000, x unit – 1 year). Shift the origin to 2002.

17. Explain the ratio to moving average method.

18. Compute the seasonal ideas for the following data :

Quarter/Year	2010	11	12	13
First (J.– March)	75	86	90	100
Second (April – June)	60	65	72	78
Third (July – Sept.)	54	63	66	72
Fourth (Oct. – Dec.)	59	80	85	93

                    (6×3=18)

PART – D

Answer **any two** questions **each** carrying **8** marks **not** exceeding **3** pages.

19. You are given the following data :

	x	y
Arithmetic Mean	36	85
Standard deviation	11	8

Correlation coefficient between x and y = 0.66.

   i) Find the two regression equations.

   ii) Estimate the value of x when y = 75.

20. Coefficient of correlation between two variables is calculated to be – .98. Find the value of probable error and hence interpret the result (n = 10). Find the limits within which population correlation coefficient may lie.

21. Find the trend equation from the following information :

   $n = 8$, $\sum y = 47.8$, $\sum 12$, $\sum x^2 = 60$ and $\sum xy = 67.4$.   **(2×8=16)**