K18U 0545

Reg. No. : ....

Name : ....

II Semester B.Com. Degree (C.B.C.S.S. – Reg./Supple./Imp.) Examination, May 2018
COMPLEMENTARY COURSE IN COMMERCE
2C02 COM : Quantitative Techniques for Business Decisions
(2014 Admn. Onwards)

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **all** questions. **Each** question carries ½ mark.

1. _____ is an analysis of the covariation between two or more variables.

2. The value of the coefficient of correlation shall always lie between _____ and
_____

3. A probability is a number which ranges from _____ to _____

4. The mean plus and minus 1.96 standard deviations will include _____ percent
of the observations in normal distribution.   (4×½=2)

PART – B

Answer **any four** questions. **Each** question carries 1 mark.

5. What is scatter diagram ?

6. Define Binomial distribution.

7. What do you mean by mutually exclusive events ?

8. What is conditional probability ?

9. What is permutation ?

10. What is moving average method ?   (4×1=4)

P.T.O.

PART – C

Answer **any six** questions (**Not** exceeding **one** page). **Each** question carries **3** marks.

11. State the difference between correlation and regression.

12. Discuss the addition and multiplication theorem of probability.

13. What is rank correlation ?

14. Calculate the coefficient of correlation between X and Y from the following data :

    X 5 7 3 1 9 12 8 3
    Y 8 9 5 4 9 13 7 9

15. Calculate the trend values by the method of least squares. What would be the production in 2020 if the same rate continuous.

Year	2008	2010	2011	2012	2013	2014	2017
Production (in thousand quintals)	77	88	94	85	91	98	90

16. Calculate Spearman's coefficient of rank correlation for the following data :

    X 53 98 95 81 75 61 59 55
    Y 47 25 32 37 30 40 39 45

17. A problem in statistics is given to five students A, B, C, D and E. Their chances of solving it are 1/2, 1/3, 1/4, 1/5 and 1/6. What is the probability that the problem will be solved.

18. An urn contains 8 red, 3 white and 9 blue balls. If 3 balls are drawn at random, determine the probability that (a) all 3 are red (b) all 3 are white and 2 are red and 1 is blue. **(6×3=18)**

PART – D

Answer **any two** questions. **Each** question carries **8** marks.

19. Define time series. Explain the different components of time series.

20. From the following data of marks in HRM and Marketing, form the two regression equations.

    Also calculate the most likely marks in Marketing when the marks in HRM are 30.

Marks in HRM	25	28	35	32	31	36	29	38	34	32
Marks in Marketing	43	46	49	41	36	32	31	30	33	39

21. A coin is tossed six times. What is the probability of obtaining four or more heads ? **(2×8=16)**