M 8696

Reg. No. : .....

Name : .....

II Semester B.Com. Degree (CCSS – Supple./Improv.) Examination, May 2015

COMPLEMENTARY COURSE IN COMMERCE

2C02 COM : Quantitative Techniques for Business Decisions

(2012-13 Adm.)

Time : 3 Hours Max. Weightage : 30

PART – A

This part consists of **two** bunches of questions carrying **equal** weightage of **one**. **Each** bunch consists of **four** objective type questions. Answer **all** questions.

I. 1) The correlation coefficient has a least value

a) 0 b) – 1 c) + 1 d) – 2

2) The variable, we are using to predict another one is

a) dependent b) time series b) independent d) regression

3) The effects of earthquake is a reason for ____ in time series.

a) seasonal b) cyclic c) trend d) irregular

4) Which among the following is not a probability ?

a) 0 b) 1 c) 0.5 d) 1.5 **(W = 1)**

II. 5) If X ~ N (9, 3) the value of P (X ≥ 9) is

a) 0.5 b) 0.475 c) 0.465 d) 0.425

6) The number of typographical errors in a book published by a good company is an example for

a) Binomial b) Bernoulli c) Poisson d) Normal

P.T.O.

7) If A and B are independent then P (A/B) is

a) P (A) b) P (B) c) $\frac{P(A \cap B)}{P(A)}$ d) $P(A \cap B)$

8) The probability of getting a black king from a deck of card is

a) $1/52$ b) $2/52$ c) $3/52$ d) $4/52$ **(W = 1)**

PART – B

Answer **any eight** questions in **one** or **two** sentences **each**. **Each** question carries a weightage of **one**.

9) Define rank correlation coefficient.

10) If the covariance between X and Y is 84 and their standard deviations are 6 and 18 then find the value of correlation coefficient.

11) State the utility of time series.

12) Define the regression equations.

13) Define mutually exclusive events.

14) What is meant by conditional probability ?

15) Write down the pdf of normal distribution.

16) What are the models of time series ?

17) Distinguish between linear and nonlinear regression.

18) Explain the classical definition of probability. **(W. 1×8=8)**

PART – C

Answer **any six** questions. Answer **not** to exceed **one** page **each**. **Each** question carries a weightage of **two**.

19) Explain Poisson distribution and its properties.

20) Distinguish between correlation and regression analysis.

21) Explain the uses of scatter diagram.

22) What is meant by moving average ? How it can be used in measuring trend ?

23) Two persons A and B tries to solve a problem independently. The probability that A will solve is $\frac{1}{5}$ and probability that B will solve is $\frac{2}{3}$. Find the probability that the problem will be solved by (a) Both of them (b) Exactly one of them.

24) Explain the importance of Bayes theorem.

25) For a Binomial distribution with mean 30 and variance 15. Find the value of n and p.

26) Using real life examples explain direct and inverse correlation. **(W. 6×2=12)**

PART – D

Answer **any two**. **Each** question carries a weightage of **four**. **(W. 2×4=8)**

27) Define time series. Explain its components.

28) Calculate the rank correlation coefficient

Rank of X :	1	2	3	4	5	6	7	8
Rank of Y :	4	2	4	5	1	8	6	7

29) Fit a straight line trend by the method of least squares

Year	2001	2002	2003	2004	2005	2006	2007
No. of Tourists	300	700	600	800	900	700	1000