



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 c) 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 $X \sim N(9, 3)$ the value of $P(X \geq 9)$ 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) $\frac{1}{52}$ b) $\frac{2}{52}$ c) $\frac{3}{52}$ d) $\frac{4}{52}$ (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. 6x2=12)

PART – D

Answer **any two**. **Each** question carries a weightage of **four**. (W. 2x4=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

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