



UN – 362

III Semester B. Com. Examination, November/December 2015
(CBCS) (Fresh)

(2015-16 and Onwards)

COMMERCE

3.6 : Quantitative Analysis for Business Decisions – II

Time : 3 Hours

Max. Marks : 70

Instruction : Answer should be **completely** either in **English** or in **Kannada**.

SECTION – A

1. Answer **any five** sub questions. **Each** sub question carries **two** marks. **(5×2=10)**
- What is rank correlation ?
 - Define the term regression.
 - What is a seasonal variation ?
 - Expand $(y - 1)^6 = 0$
 - What are the methods of sampling ?
 - What is an Event ?
 - If, $r = 0.6$ and $N = 64$ of a distribution, find the probable error.

SECTION – B

Answer **any three** questions. **Each** question carries **six** marks. **(3×6=18)**

2. Marks scored by 6 participants in a beauty contest assigned by two judges are given below

Marks assigned by Judge – I : 30 36 47 48 32 28

Marks assigned by Judge – II : 28 38 49 46 30 26

Calculate rank correlation after assigning rank

3. The correlation co-efficient between the variables X and Y is $r = 0.60$. If $\sigma_x = 1.50$, $\sigma_y = 2$, $\bar{X} = 10$, $\bar{Y} = 20$. Calculate two regression equations.

4. Estimate the missing value of production.

Year	:	2010	2011	2012	2013	2014	2015
Production	:	320	300	?	280	278	250

5. What are the different types of probability sampling techniques ?
6. One card is drawn from a standard pack of 52. What is the probability that it is :
- A Spade
 - A King
 - The ace of club

P.T.O.



SECTION – C

Answer any three questions. Each question carries fourteen marks. (3×14=42)

7. From the following data of the marks obtained by 10 students in Accounts and Statistics. Calculate Pearson's correlation.

Roll No :	1	2	3	4	5	6	7	8	9	10
Marks in : Accounts	20	25	60	45	80	28	55	65	30	75
Marks in : Statistics	25	50	55	56	60	70	72	78	80	63

8. The heights (in cms) of a group of father's and son's are given below :

Height of : father's 158 166 163 165 167 170 167 152 177 181

Height of : son's 163 158 167 170 160 180 170 175 172 175

Find the lines of regression and estimate the height of son when the height of father is 164cm.

9. Fit a straight line trend to the following by the method of least squares. Assuming that the same rate of changes continues, state what would be the estimated earning for the year 2016. Also show actual and trend lines on a graph.

Year : 2005 2006 2007 2008 2009 2010 2011 2012

Earnings : 38 40 65 72 69 60 87 95

(in lakhs)

10. You are required to find out the number of workers falling within Rs. 250 and Rs. 350.

Earnings for daily Number of workers

Up to 100 50

Up to 200 150

Up to 300 300

Up to 400 500

Up to 500 700

11. Estimate the production for the year 2004 and 2006 with the help of the following table using Binomial Expansion method.

Year : 2001 2002 2003 2004 2005 2006 2007

Production : 200 220 260 ? 350 ? 430

(in '000' tones)