Business Statistics & Mathematics
Punjab University BCOM/ADP Commerce I Paper 2010

Time: 3 Hours   **Max. Marks: 100**

Note: Attempt any five questions in all taking two questions from each section. Question No 1 is compulsory. All questions carry equal marks.

Section I

Q.1 Calculate A.M, Harmonic Mean, Standard Deviation and Coefficient of Variation

Wages	No of Workers	Wages	No of Workers
117—124	13	159—166	81
124—131	17	166—173	65
131—138	33	173—180	55
138—145	47	180—187	40
145—152	56	187—194	20
152—159	73		

Q.2

X: 16, 72, 73, 63. 83. 80. 66 66. 74, 62

Y: 40, 52, 43, 49, 61, 58, 44, 58, 50, 45

Required: Calculate coefficient of correlation and comment on the answers.

Q.3. Test the association

Attributes	A1	A2	A3
B1	20	15	30
B2	30	18	35
B3	35	20	40

The value of Chi-Square at 5% level of significance 4 d.f is 9.488

Q.4. Compute index number for 2002 from the following data taking 2000 as base using:

(i) Laspeyre's **(ii)** Paasche's **(iii)** Fisher's Method

Commodity	2000		2002	
	Price	Quantity	Price	Quantity
A	5	100	6	120
B	7	120	10	80
C	10	80	12	80
D	4	50	5	60
E	8	70	8	80

Section II

Q.5 $If\ A = \begin{bmatrix} 1 & 4 & 3 \\ 2 & 1 & 8 \\ 1 & 1 & 2 \end{bmatrix}, B = \begin{bmatrix} 2 & 1 & 2 \\ 0 & -4 & 8 \\ 6 & 1 & 4 \end{bmatrix} Calculate\ (i)A + B\ (ii)2A - 3B\ (iii)AB$

Q.6 (a) Solve the following simultaneous equations:
2x + y = -7
3x + 2y = -12
(b) Solve the quadratic equation $6x^2 - 5x - 6 = 0$

Q.7 Find out the compound amount and compound interest at the end of 3 years on a sum of Rs. 20,000 borrowed at 6% compounded annually.

Q.8 A 90 days Rs. 4,000, 7% interest bearing note dated April 4, was discounted on May 4, at a discount rate of 8%. What was the discounted value of the note? (Take 360 days in the year)

The End