

THREE YEAR BBAS (CBCS) DEGREE EXAMINATION, APRIL 2017

SECOND SEMESTER

## Paper II — QUANTITATIVE METHODS FOR MANAGERS

Time : 3 Hours

Max. Marks : 75

## SECTION - A

Answer any FIVE of the following questions.

(Marks : 5 × 5 marks = 25 marks)

1. What do you mean by "Measures of Central Tendency"?
2. Mean = 160, Median = 150; find Mode.
3. Find Range and Coefficient of Range for following data.  
14    18    19    21    23    25    27    29    33    34    37
4. If the covariance between X and Y variables is 10 and the Variance of X and Y are respectively 16 and 9, find the coefficient of correlation.
5. Define
  - (a) Row matrix
  - (b) Square matrix
6. If  $A = \begin{pmatrix} 2 & 7 & 8 \\ 5 & 4 & 3 \end{pmatrix}$   $B = \begin{pmatrix} 1 & 5 & 7 \\ 4 & 3 & 1 \end{pmatrix}$  Prove  $2(A + B) = 2A + 2B$ .
7. Define the following with examples.
  - (a) Union of set
  - (b) Complement of set.
8. If  $A = \{1, 2, 3, 4\}$ ,  $B = \{2, 3, 4, 5\}$ ,  $C = \{4, 5, 6, 7\}$  find  $(A \cup B) \cup C$ .
9. Find inverse of  $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ .
10. Find Range to the following data  
200, 210, 208, 160, 220, 250.

SECTION - B

Answer ONE question from each Unit.

(Marks : 5 × 10 marks = 50 marks)

UNIT - I

11. (a) What are the merits and demerits of Arithmetic Mean?

Or

- (b) Find Z for the following data

X:	10	20	30	40	50	60	70	80
F:	4	9	30	48	51	24	12	2

UNIT - II

12. (a) Compute Coefficient of Q.D to the following data

X	0-4	4-8	8-12	12-16	16-20	20-24	24-28	28-32
F	4	9	23	55	62	30	12	5

Or

- (b) Compute Mean, S.D. and Variance for the following data.

C.I:	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60
f:	15	32	51	78	97	109

UNIT - III

13. (a) Calculate the co-efficient of correlation from the following data:

X	9	8	7	6	5	4	3	2	1
Y	15	16	14	13	11	12	10	8	9

Or

- (b) Find the rank correlation for the following distribution.

Marks Economics :	48	60	72	62	56	40	39	52	30
Marks accountancy :	62	78	65	70	38	54	60	32	31

UNIT - IV

14. (a) If  $A = \{1, 2, 3, 4\}$ ,  $B = \{2, 4, 5, 6\}$ ,  $C = \{1, 3, 4, 6, 8\}$ . Prove that  $A \cup (B \cap C) = (A \cup B) \cap (A \cup C)$ .

Or

- (b)  $A = \{9, 10, 11, 12, 15, 17\}$ ;  $B = \{7, 8, 9, 12\}$ ;  $C = \{3, 4, 5, 6\}$ . Prove that  $(A \cup B) \cup C = A \cup (B \cup C)$ .

UNIT - V

15. (a) Define a matrix and give its different types with examples.

Or

- (b) Use Cramer's Rule and solve for x,y,z the equation

$$6x + y - 3z = 5$$

$$x + 4y - 2z = 5,$$

$$2x + y + 4z = 8.$$