



I Semester B.B.A. Examination, January 2025  
(SEP 2024 – 25)  
AVIATION MANAGEMENT  
BBAV 1.4 : Quantitative Analysis for Business

Time : 3 Hours

Max. Marks : 80

**Instruction :** Answers should be written in **English** only.

SECTION – A

I. Answer **any seven** out of ten questions. **Each** question carries **2** marks.

(7×2=14)

1) a) What is simultaneous equation ?

b) Define ratio.

c) What is the union of two sets ?

d) What do you mean by permutation ?

e) What are the types of matrices ?

f) What is compound interest ?

g) What is the union of two sets ?

If  $A = \{10, 11, 12, 13\}$  and  $B = \{13, 14, 15\}$

h) Define set.

i) Solve the equation  $5x + 4 = 19$ .

j) What is annuity ?

SECTION – B

II. Answer **any three** out of five questions. **Each** question carries **8** marks.

(3×8=24)

2) If 20 Men can do a job in 18 days, how long will 60 men take to do the same job ?

P.T.O.



3) Quadratic Equation solve using formula method :

$$2x^2 - 7x + 3 = 0.$$

4) Find out compound interest on ₹ 800 for 3 years at 5% per annum.

5) If A and B are two sets, prove that

$$n(A \cup B) = n(A) + n(B)$$

$$\text{if } A = \{1, 2, 3, 4, 5\} \text{ } B = \{3, 4, 5\}.$$

6) If  $A = \begin{bmatrix} 1 & 2 \\ 2 & 4 \end{bmatrix}$   $B = \begin{bmatrix} 3 & 4 \\ 1 & 2 \end{bmatrix}$   $C = \begin{bmatrix} 4 & 2 \\ 1 & 4 \end{bmatrix}$

Show that 1)  $A + B = B + A$

$$2) (A + B) + C = A + (B + C)$$

OR

In how many ways can the letter of the word "LEADER" be arranged ?

Solve using permutation and combination.

### SECTION – C

III. Answer **any three** out of five questions. **Each** question carries **14** marks.

(3×14=42)

7) Solve the problem :

a) Evaluate  $3! + 4! = 7!$

Prove factorial 3 plus factorial 4 is equal to factorial 7 or not.

b) Elimination method.

$$3x - 4y = -22$$

$$4x - 3y = -13.$$

8) a) Find the simple interest on ₹ 2,000 at 5% per annum for 4 years.

b) Find the compound interest on ₹ 1,000 for 3 years at 10% per annum.



9) Find the duplicate ratio of 2:3 and 3:4, triplicate ratio of 3:5 and 1:2 and the ratio compounded of all the obtained ratio.

10) If  $U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$

$$A = \{1, 2, 4, 6, 8\}$$

$$B = \{2, 4, 5, 9\}$$

Find  $A \cup B$ ,  $A \cap B$ ,  $A'$ ,  $B'$ ,  $A' \cap B'$ ,  $(A \cap B)'$ ,  $A' \cap B'$ ,  $B - A$ ,  $A - B$  using venn diagram.

11) Solve matrices using multiplication.

$$\text{If } A = \begin{bmatrix} 2 & 5 \\ 1 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 1 & -1 \\ -3 & 2 \end{bmatrix}$$

Find  $AB$  and  $BA$

Is  $AB = BA$  ?

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