Q.1.A]Fill in the blanks. (05)

1. I denotes_____.
    a. Rate of interest
    b. Interest
    c. Amount
    d. None of these

2. EMI stands for_____.
    a. Equated monthly installment.
    b. Equivalent monthly investment
    c. Earned monthly installment

3. _____ is a fund that is created to accumulate a specific sum of money at some definite date.
    a. Annuity
    b. Perpetuity
    c. Sinking fund
    d. None of these.

4. NNP stands for _____.
    a. Net national product
    b. Net national price
    c. Net network price
    d. None of these

5. _____ is the ratio of a country's expenditure on debt service payments to its total earnings of foreign exchange on exports of goods and services.
    a. Debt Service Ratio
    b. External Debt
    c. Trade balance
    d. None of these

B] True or false. (05)

1. A matrix containing only one row is called a row matrix.
2. A matrix whose numbers of rows are equal to the number of columns is called column matrix.
3. A + B=B+ A is called commutativity of addition.
4. A+0=A is called additive inverse.
5. The output of the non-monetized sector is one of the problems in estimating GDP.

C] Match the following.

A		B	(05)
I.	Amount	1) $p[(1+i)^n - 1]$	
II.	Interest	2) $\dfrac{Pi}{[1-(1+i)-n]}$	
III.	Compound interest	3) $p \times n \times i$	
IV.	EMI	4) $A^T + B^T$	
V.	$(A+B)^T$	5) $P+I$	

Q.2 A] If $A = \begin{bmatrix} 3 & -1 \\ 4 & 0 \end{bmatrix}$, find 5A and 1/5 A.

B] If $A = \begin{bmatrix} 9 & 1 \\ 4 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 5 \\ 7 & 13 \end{bmatrix}$, find the matrix X such that 3A+5B+2X=0. (08)

(07)

OR

C] Solve the following linear programming problems graphically. (15)

Maximize $Z = 50x_1 + 100$

Subject to $x_1 + x_2 \le 30$

$x_1 + x_2 \le 12$

$x_1 \ge 0, \quad x_2 \ge 0$

Q.3.A] Divide a profit of Rs. 25,828 between two partners in the ratio 4:7.

B] Find, 3 positive numbers in the ratio 3:5:2 such that the sum of their square is equal to 2432. (07)

(08)

OR

C] A particular sum of money amount to Rs. 5,13,216 in 2 yrs and Rs. 5,54,273.28 in 3 yrs. Find the sum and the compound interest rate.

(15)

Q.4.A] Find the accumulated value after 4 years of an immediate annuity of Rs. 20,000 p.a with interest compounded at 6% p.a.

(08)

B] If $A = \begin{bmatrix} 1 & -2 \\ 4 & 3 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 6 \\ 7 & -3 \end{bmatrix}$ then show that AB≠BA.

(07)

OR

C]Solve graphically.

Maximize $Z = 3x_1 + 12x_2$
Subject to $x_1 + 4x_2 \le 6$
$x_1 - 2x_2 \le 0$
$x_1, x_2 \ge 0$

5] Answer in short.(Any 3)

1. External Economic Indicators
2. Problems in Estimating the GDP of India.
3. Types of Risk
4. GDP
5. Price level and Information