Note:- 1) All questions are compulsory.
      2) Figures to the right indicate maximum marks.

Q1) (A) Select the right answer from the following Multiple choice questions. (Any 8)   8M

1) CALCULATE 25% OF 20% OF 10000.

   A) 5000   B) 500   C) 50   D) 5 (CO1,R)

2) CALCULATE 4% OF NUMBER 600.

   A) 24   B) 48   C) 96   D) 144 (CO2,R)

3) DIVIDE THE NUMBER 5016 INTO TWO PARTS SUCH THAT THE RATIO IS 5:6.

   A) 2280, 2736   B) 2000, 3016   C) 3000, 2016   D) 1000, 4016 (CO2,R)

4) CONVERT THE FOLLOWING IN THE SMALLEST RATIO.

2KG AND 500 GMS, 5KG AND 500 GMS

   A) 5:6   B) 5:11   C) 5:7   D) 6:9 (CO3, R)

5) 5X+10Y = 50, IF Y=0, THEN X = _____ .

   A) 5   B) 10   C) 15   D) 20 (CO2, R)

6) _____ means total income of nation / total population.

   A) PCI b) GDP   c) NI   d) HDI (CO1, 2, R)

7) Beta of a share is

   (a) Expected return   (b) Slope of the regression line   (c) X intercept   (d) y intercept (CO1, R)

8) A combination of a group of securities is called

   (a) Bunch   (b) Portfolio   (c) Sum   (d) Scheme (CO1, R)

9) If the angles of a triangle are in the ratio 3:8:9, then their respective degree measures are

   (a) $27^0,72^0,81^0$ (b) $32^0,70^0,78^0$ (c) $24^0,64^0,92^0$ (d) $60^0,60^0,60^0$ (CO2, R)

10) A set of simultaneous equations can be solved using. (CO3, R)

   (a) Cramer's Rule   (b) Cromton's Rule   (c) Graham's Rule   (d) Newton's law

Q1) (B) State whether the following statements are True or False.   (Any 7)   7M

1) Investment always carries risk. (CO1,R)
2) Sale = Cost + Profit(CO1,R)
3) Ratio is a figure denoted by another figure. (CO2,R)
4) 2 x 3 is a square matrix. (CO2,R)
5) 1 0 0 1 is identity matrices. (CO3,U)
6) (2,3) lies in first quadrant. (CO2,U)
7) When all elements of a matrix is zero, it is called null matrix.(CO2,R)
8) Profit = Cost + Discount(CO1,U)
9) Shares doesn't have any risk involved. (CO3,U)
10) Cramer's rule is used for testing of hypothesis.(CO3,R)

Q2) (A) Maximize Z = 15x + 10y, subject to 8x + 5y ≤60, 4x + 5y ≤ 40, x & y ≥ 0.(CO1,A)   8M

Q2) (B) Minimize Z = 12x + 20y, sub to x + y ≥ 7, 5x + 2y ≥ 20, x ≥ 0, y ≥0 (CO1,A)   7M

                OR

Q2) (C) Find A x B, if A =   4   6   8   B =   -4   3   2   (CO1,2,A,R)8M
                              6   5   3   5   -4   3
                              5   4   6   3   2   -4

Q2) (D) If A =   5   7   B =   6   8   find 2A + 3B +I.   (CO1,2,A)   7M
                 4   9   4   3

Q3) (A) Solve the following equations simultaneously using Cramer's rule.

   x+2y+z = 6,   2x -2y +z = 1,   -x +2y – 2z = 5   (CO1,A)   8M

Q3) (B) Expand A =   x   y   z   (CO2 ,R,U)   7M
                      y   z   x
                      z   x   y

OR

Q3) (C)Monthly income of A and B are in the ratio 7:4 and their expenditures are in the ratio 9:5. Each of them saves Rs. 10000. Find their incomes. (CO3,A)   8M

Q3) (D)MR. X,Mr, Y, and Mr. Z are partners with ratio 5:3:2 in the first six months company gets profit of Rs. 300000 and in next six months company gets profit of Rs. 200000. Find the profit of each partner in entire year. (CO2 ,A)   7M

Q4) (A)The following table gives the probability distribution of the return of two shares X and Y. Find the expected value and the total risk for both shares and comment. (CO2,A)   8M

State of economy	1	2	3	4	5
Probability	0.10	0.20	0.35	0.25	0.10
Returns of share X (%)	5	6	7	8	9
Return on share Y (%)	3	5	7	9	11

Q4) (B)Mr. Guddu purchase some shares of a company for Rs. 625 each and sold them 6 months later at Rs. 735 each. In the meanwhile, he received a dividend of Rs. 40 per share. Find his return for the 3 months holding period and the annualised return. (CO2,A,U)   7M

OR

Q4) (C)If A = $\begin{matrix} 5 & -7 & 4 \\ -5 & 4 & 8 \\ 6 & 5 & -4 \end{matrix}$ Find A^2. (CO3,A)   8M

Q4) (D)Find three positive numbers in the ratio 3:5:2 such that the sum of their squares is equals to 2432. (CO3,A)   7M

Q5) Write Short Notes (Any 3)   15M
1) Economic Indicators (CO1,U)
2) Types of matrices (CO3,R)
3) What is ratio and types (CO2,U)
4) Null hypotheses (CO1,R)
5) Cramer's rule (CO2,3,R,U)

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