B.A. DEGREE EXAMINATION,ODD SEMESTER 2020
III Year V Semester
Mathematics for Economists

Max.marks :25

Answer any **FIVE** questions $(5 \times 5 = 25)$ Marks

1. If A $= \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$, find $A^2 - 5A - 7I$.
2. Given A $= \begin{bmatrix} 0.4 & 0.1 \\ 0.7 & 0.6 \end{bmatrix}$ and the final demand is 50 and 100, Find the gross output.
3. If $x^3 + 5x^2y - yx$ find $\frac{dy}{dx}$.
4. Discuss about the Total, Average and Marginal cost curves and Revenue curves.
5. Discuss the application of partial derivative in Economics.
6. Find the maximum and minimum value of the function $y = x^3 - 3x + 1$.
7. Let A $= \begin{bmatrix} 2 & 4 \\ 3 & 2 \end{bmatrix}$ and B $= \begin{bmatrix} 1 & 0 \\ 3 & 2 \end{bmatrix}$ verify $(A + B)^T = A^T + B^T$ where A^T is transpose of A, B^T is the transpose of B.