BVM College of Management Education Gwalior

Question Bank

Discrete Mathematics

BCA 301

Q.1 What do you mean by the De Moivre's theorem?

Q.2 What do you mean by the Sub-matrix of a matrix?

Q.3 What do you mean by the Rank and Nullity of a matrix ?

Q.4 Explain the following are

(a) Non-singular matrix

(b) Matrix equality

(c) Elementary matrices

Q.5 $A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 1 & 4 \\ 3 & 2 & 1 \end{bmatrix}$ $B = \begin{bmatrix} 3 & 2 & 2 \\ 4 & 1 & 3 \\ 1 & 1 & 4 \end{bmatrix}$

Find tha value of AXB

Q.6 Explain the Caley-Hamilton theorem With example.

Q.7 $A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 1 & 4 \\ 3 & 2 & 1 \end{bmatrix}$ find the Matrix of A^{-1}

Q.8 Explain the Characteristic roots and Characteristic vectors of a matrix.

Q.9 What do you mean by the Transpose of a matrix? Explain with example

Q.10 $A = \begin{bmatrix} 1 & 2 & 3 \\ 1 & 1 & 4 \\ 3 & 2 & 1 \end{bmatrix}$ $B = \begin{bmatrix} 3 & 2 & 2 \\ 4 & 1 & 3 \\ 1 & 1 & 4 \end{bmatrix}$ Find the value of A+B