

# Matrix

## Exercise 1.2 for Class IX

Q.1: From the following matrices, identify unit matrices, row matrices, column matrices and null matrices.

$$A = \begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$$

$$B = [2 \ 3 \ 4]$$

$$C = \begin{bmatrix} 4 \\ 0 \\ 6 \end{bmatrix}$$

$$D = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

$$E = [0]$$

$$F = \begin{bmatrix} 5 \\ 6 \\ 7 \end{bmatrix}$$

Q.2: From the following matrices, identify

a) Square Matrix

b) Rectangular Matrix

c) Row Matrix

d) Column Matrix

e) Identity Matrix

f) Null Matrix

i.  $\begin{bmatrix} -8 & 2 & 7 \\ 12 & 0 & 4 \end{bmatrix}$

ii.  $\begin{bmatrix} 3 \\ 0 \\ 1 \end{bmatrix}$

iii.  $\begin{bmatrix} 6 & -4 \\ 3 & -2 \end{bmatrix}$

iv.  $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

v.  $\begin{bmatrix} 1 & 2 \\ 3 & 4 \\ 5 & 6 \end{bmatrix}$

vi.  $\begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$

vii.  $\begin{bmatrix} 1 & 2 & 3 \\ -1 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix}$

viii.  $\begin{bmatrix} 0 & 0 \\ 0 & 0 \\ 0 & 0 \end{bmatrix}$

Q.3: From the following matrices, identify diagonal, scalar and unit (identity) matrices.

$$A = \begin{bmatrix} 0 & 4 \\ 4 & 0 \end{bmatrix}$$

$$B = \begin{bmatrix} 2 & 0 \\ 0 & -1 \end{bmatrix}$$

$$C = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

$$D = \begin{bmatrix} 3 & 0 \\ 0 & 0 \end{bmatrix}$$

$$E = \begin{bmatrix} 5 & -3 & 0 \\ 0 & 1 & 1 \end{bmatrix}$$