**Guess Paper 2013
Class - XII
SUBJECT – MATHEMATICS**

Q.01Evaluate the following

 (i) $\left[\begin{matrix}2\\4\\6\end{matrix}\right]\left[\begin{matrix}1&2&3\end{matrix}\right]$ (ii) $\left[\begin{matrix}1&2&3\end{matrix}\right]\left[\begin{matrix}2\\4\\6\end{matrix}\right]$

Q.02 using elementary transformations find A-1 if exist,

 $\left[\begin{matrix} 2&-1&3\\-5& 3&1\\-3& 2&3\end{matrix}\right]$

Q.03The number of all possible matrices of order 3$×$3 with each entry 0 or 1 is

 (i) 27 (ii) 18 (iii) 81 (iv) 512

Q.04 Find a 2$×$2 matrix B such that

 $B\left[\begin{matrix}1&-2\\1& 4\end{matrix}\right]=\left[\begin{matrix}6&0\\0&6\end{matrix}\right]$

Q.05 Let

 $A=\left[\begin{matrix}0&-\tan(\frac{α}{2})\\\tan(\frac{α}{2})& 0\end{matrix}\right]$ and I is the identity matrix of order 2. Show that

 $\left(I+A\right)=\left(I-A\right)\left[\begin{matrix}\cos(α)&-\sin(α)\\\sin(α)& \cos(α)\end{matrix}\right]$

Q.06 If

 $A=\left[\begin{matrix}-4&1\\ 3&2\end{matrix}\right]$, Find *f*(A) if *f*(x) = x2 – 2x +3.

Q.07 Express the following matrix as the sum of a symmetric and a skew symmetric matrix.

 $\left[\begin{matrix} 1&3&5\\-6&8&3\\-4&6&5\end{matrix}\right]$

Q.08 If $\left[\begin{matrix}2x&1\\5&x+2y\end{matrix}\right]=\left[\begin{matrix}4&1\\5&0\end{matrix}\right]$, find x and y.

Q.09 If $A=\left[\begin{matrix}1&a\\0&1\end{matrix}\right]$ , then find A4 .

Q.10 If $A= \left[\begin{matrix}3&-4\\1&-1\end{matrix}\right]$ then show that $A^{n}=\left[\begin{matrix}1+2n& -4n\\n&1-2n\end{matrix}\right]$,where n is a positive integer.