## MHT CET 2024 PCM May 2 Shift 2 Question Paper

If B =  $\begin{bmatrix} 3 & \alpha & -1 \\ 1 & 3 & 1 \\ -1 & 1 & 3 \end{bmatrix}$  is the adjoint of a 3×3 matrix A and |A| = 4, then  $\alpha$  is equal to

A 1

B 0

C -1

D -2

IUPAC name of given ether is.....

2.

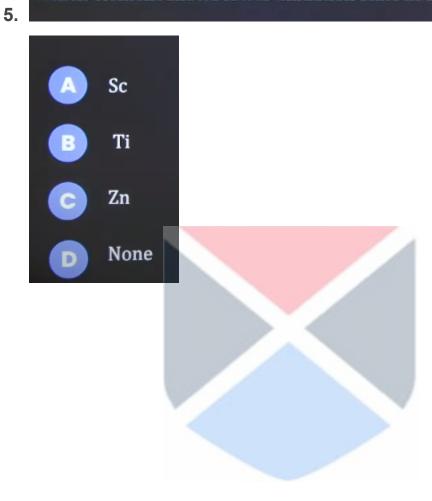
If 
$$A = \begin{bmatrix} 0 & 1 & 2 \\ 1 & 2 & 3 \\ 3 & 1 & 1 \end{bmatrix}$$
, then  $A^{-1} =$ 

3.

A 
$$\left(\frac{1}{2}\right)\begin{bmatrix}0 & 1 & 2\\ 3 & 2 & 1\\ 4 & 2 & 3\end{bmatrix}$$
A  $\left(\frac{1}{2}\right)\begin{bmatrix}0 & 1 & 2\\ 3 & 2 & 1\\ 4 & 2 & 3\end{bmatrix}$ 
C  $\left(\frac{1}{2}\right)\begin{bmatrix}-1 & \frac{5}{2}\\ -4 & 3 & -1\\ \frac{5}{2} & \frac{-3}{2} & \frac{1}{2}\end{bmatrix}$ 
C  $\left(\frac{1}{2}\right)\begin{bmatrix}1 & -1 & -1\\ -8 & 6 & -2\\ 5 & -3 & 1\end{bmatrix}$ 

Which of the following is Clemmensen reduction?

Which element shows lower oxidation state in 3d series?



Calculate pH of..... 6. What is the conc. Of H<sup>+</sup> ion if pH is 2.7 7. The relationship between solubility of gas in a liquid at constant temperature and external pressure is? 8. How many unit particles in BCC Unit cell? 9. The most suitable reagent for the conversion of R-CH<sub>2</sub>-OH=R-CHO is? 10. Edge length of bcc unit cell is..... 11.

## Preliminary Test of Nanoparticles is A x-ray diffraction B Scanning of neutron C Scanning of electron None of these

- IUPAC name of following Haloarene is......
- The converse of  $((\sim p) \land q) \Rightarrow r$  is

12.

13.

$$((\sim P) \lor q) \Rightarrow r \sim$$

$$(\sim r) \Rightarrow p \land q$$

$$(p \lor (\sim q)) \Rightarrow (\sim r)$$

$$(\sim r) \Rightarrow ((\sim P) \land q)$$

The negative of (p 
$$\land$$
 ( $\sim$ q))  $\lor$  ( $\sim$ p) is equivalent to :

A p  $\land$  q

B P  $\land$  ( $\sim$ q)

C p  $\land$  (q  $\land$  ( $\sim$ p))

D P  $\lor$  (q  $\lor$  ( $\sim$ p))

The variance of the following probability distribution is,

 $\begin{array}{c|cccc}
 & \frac{1}{8} \\
 & \frac{5}{8} \\
 & \frac{1}{4} \\
 & \frac{3}{8}
\end{array}$ 

15.