

Course B-Tech

²⁺³⁺²⁺²⁺² Semester Examination, 20²² - 20²³

Class Test No. 01

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Paper Name Mathematics IB Paper Code BS M102



Signature of Invigilator

1. (i) The inverse of $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$ is ~~(a) $-\frac{1}{2} \begin{bmatrix} 4 & -2 \\ -3 & 1 \end{bmatrix}$~~

(ii) If the matrix $\begin{bmatrix} 0 & 1 & -2 \\ -1 & 0 & 3 \\ 1 & -3 & 0 \end{bmatrix}$ is singular

the value of λ is ~~(d) 2~~

(iii) If $A \cdot A^T = I$ then ~~(b) $\det A = 1$~~

(iv) ~~(d) 3~~

(v) ~~(c) A bounded and monotonic sequence is convergent.~~

(vi) The series $1+2+3+4+5+\dots$ is ~~(b) Divergent.~~