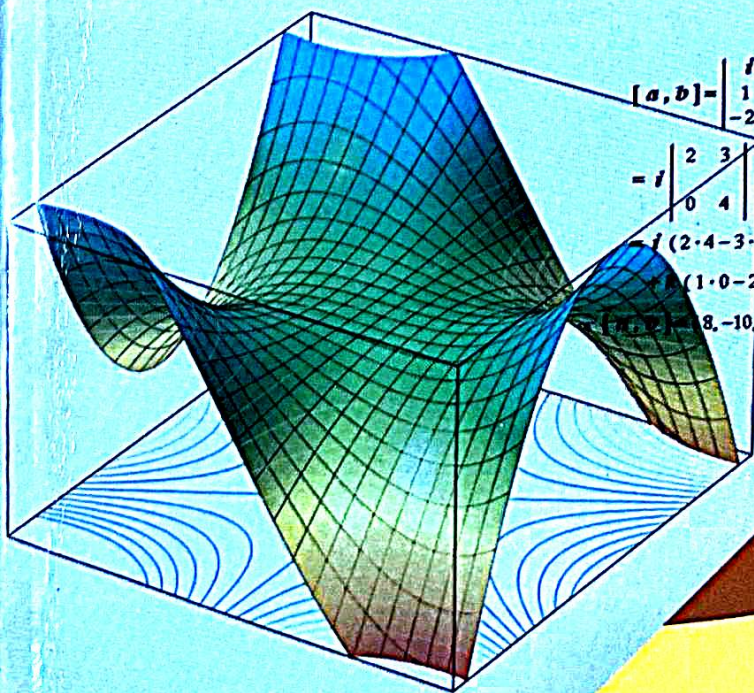


As per CBCS Syllabus

# VECTOR CALCULUS

VI Semester

Chittaranjan Mallick  
L.P. Rajkumar  
Susmita Mallick



$$\begin{aligned} [\sigma, \delta] &= \begin{vmatrix} i & j & k \\ 1 & 2 & 3 \\ -2 & 0 & 4 \end{vmatrix} = \\ &= i \begin{vmatrix} 2 & 3 \\ 0 & 4 \end{vmatrix} - j \begin{vmatrix} 1 & 3 \\ -2 & 4 \end{vmatrix} + k \begin{vmatrix} 1 & 2 \\ -2 & 0 \end{vmatrix} = \\ &= i(2 \cdot 4 - 3 \cdot 0) - j(1 \cdot 4 - 3 \cdot (-2)) + \\ &= i(1 \cdot 0 - 2 \cdot (-2)) = 8i - 10j + 4k; \\ &(\sigma, \delta) = (8, -10, 4). \end{aligned}$$

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# NUMERICAL ANALYSIS

Semester-VI

Chittaranjan Mallick  
L.P. Rajkumar  
Susmita Mallick

$$F = ma = m \frac{dv}{dt}$$

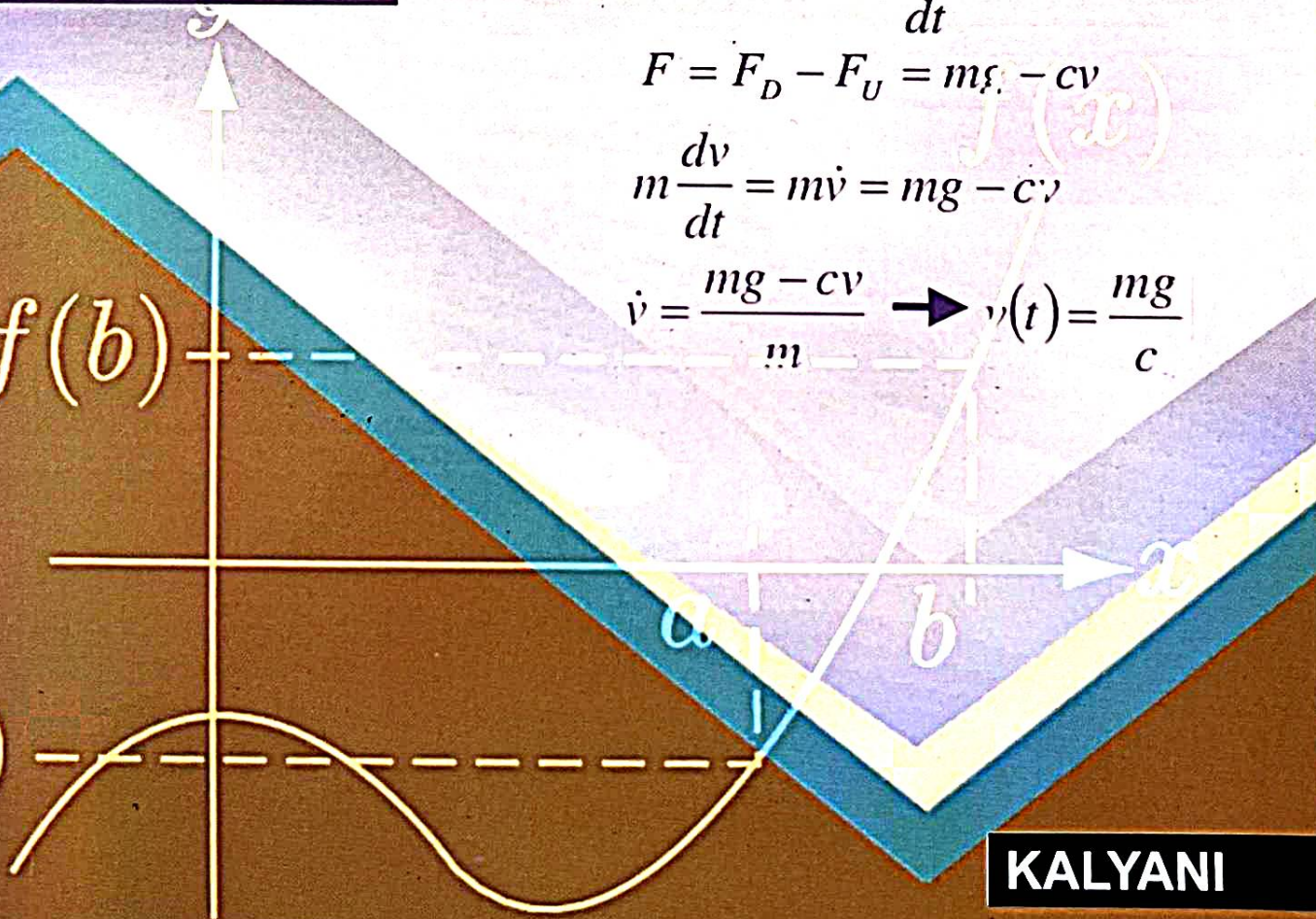
$$F = F_D - F_U = m\xi - cv$$

$$m \frac{dv}{dt} = m\dot{v} = mg - cv$$

$$\dot{v} = \frac{mg - cv}{m} \rightarrow v(t) = \frac{mg}{c}$$

$f(b)$

$f(a)$



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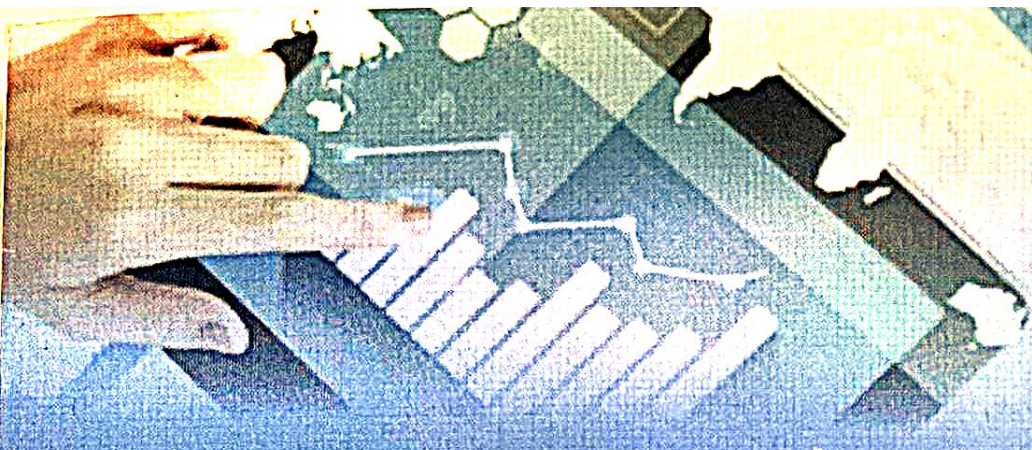
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