

Time Allowed (Solution + submission): 25 minutes (3:26—3:50)

Problem#02

[Marks: 05]

Show that the given function is a particular solution of the indicated differential equation

$$y = e^{3x} \cos x ; \quad \frac{d^2y}{dx^2} - 6 \frac{dy}{dx} + 13y = 0.$$