KFUPM – Department of Mathematics & Statistics **MATH202 –** Term 181

Quiz **4**A (Duration: 25 Minutes)

Name:	ID #:	Section: 03
Q1 (2 Pts) Find a linear differential	operator that annihilates the given function	on.
a) $x + 5x^2e^{2x}$	b) $e^{-x}\sin x - e^{2x}\cos x$	x

Q2 (4 Pts) Solve the DE: $y'' + 16y = 6 \sin x + 3 \cos x$ using the **undetermined coefficients**.

Q3. (4 pts) Use **variation of parameters** to solve the DE:

$$y'' - 2y' + y = \frac{e^x}{1 + x^2}$$