

Department of Mathematics and Statistics
King Fahd University of Petroleum and Minerals
Kingdom of Saudi Arabia

Math 101-101

Quiz # : 4

Name : = ----- ID# -----

Sec #: -----

Q 1 Solve the differential equation

$$f^{(2)}(x) = \cos(5x) + 8\sin(3x)$$

$$f(0) = 1, f^{(1)}(0) = 2$$

Q. 2 Evaluate

a) $\int (t^2 - 6\sqrt{t} + \frac{1}{t^3}) dt$

b) $\int \frac{(x^2 - 1)^2}{x^2} dx$

c) $\int 8x^2 e^{2x^3} dx$

Q3. Find $\frac{dy}{dx}$ when $\cosh(x + y) + x \cos(xy) = 6$

Q.4 Use Newton's law of approximation to evaluate $(65)^{\frac{1}{3}}$ by taking $x_1 = 2$. Find x_3 and x_5