

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 301 Major Quiz 1

Name : ID #..... Serial #:

Question 1[3 points]: Find parametric equations of the tangent line to the vector function

$$F(t) = \langle \cos(2t), \sin(2t), 1 \rangle$$

at $t = \pi/3$.

Question 2 [2 points]: Find the directional derivative of

$$f(v, w) = v^2 - 6vw^2$$

at the point $(1, 1)$ in the unit direction parallel to $3i - 4j$.