

King Fahd University of Petroleum and Minerals Department of Mathematics and
Statistics

Math-201 Semester-163 QUIZ V

NAME:

S.No.

ID:

Maximum Marks: 10

Section:07

Time Allowed: 30 minutes

- (1) Find the absolute maximum and minimum values of $f(x, y) = 2 + 2x + 2y - x^2 - y^2$ on the triangular region in the first quadrant by the lines $y = 0, y = 9 - x, x = 0$.
- (2) Use the Lagrange Multipliers find the maximum and minimum values of $f(x, y) = 4x^2 - 4xy + y^2$ subject to the constraint $g(x, y) = x^2 + y^2 = 25$.