King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math-201 Semester-121 QUIZ V

NAME: S.No. ID:

Maximum Marks: 10 Section:12 Time Allowed: 30 minutes

(1) Find the local maximum and minimum values and saddle point(s) of the function

$$f(x, y) = x + y + x^2y + xy^2$$

(2) Use Lagrange multiplier to find maximum and minimum value of the function $f(x, y) = 4x + 8y + 10z$ subject to constraint $x^2 + y^2 + z^2 = 45$.