

King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math-201 Semester-152 QUIZ IV

NAME:

S.No.

ID:

Maximum Marks: 10

Section:

Time Allowed: 40 minutes

- (1) Find and sketch the domain of the function $f(x, y) = \sin^{-1}(x - 2y)$. Is the domain of f bounded? Explain.
- (2) Find an equation of the level curve of the function $f(x, y) = \ln(x + y - 1)$ that pass through the point $(2, 1)$.
- (3) If the limit exists, compute it; if the limit does not exist, prove it

$$\lim_{(x,y) \rightarrow (0,0)} \frac{xy^4}{x^2 + 8y^8}$$