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

NAME: S.No. ID:

Maximum Marks: 10 Section:18 Time Allowed: 25 minutes

(1) Find and sketch the domain of the function $f(x,y) = \frac{\sqrt{(y-x^2)}}{(1-x^2)}$.

(2) Let $W(s,t) = F(u(s,t), v(s,t))$, where F, u, and v are differentiable, $u(1,0) = 2$, $\frac{\partial u}{\partial s}(1,0) = -2$, $\frac{\partial u}{\partial t}(1,0) = 6$, $v(1,0) = 3$, $\frac{\partial v}{\partial s}(1,0) = 5$, $\frac{\partial v}{\partial t}(1,0) = 4$, $\frac{\partial F}{\partial u}(2,3) = -1$ and $\frac{\partial F}{\partial v}(2,3) = 10$. Find $\frac{\partial W}{\partial t}(1,0)$.