Department of Mathematics and Statistics, KFUPM

Math-101 Semester-151 QUIZ VI

NAME: S.No. ID:

Maximum Marks: 8 Section: Time Allowed: 30 minutes

(1) Find the absolute minimum value of thye function $f(x) = x^3 - 3x^2 + 1; \quad -\frac{1}{2} \leq x \leq 4$.
(2) Suppose that $3 \leq f'(x) \leq 5$ for all values of x. Show that $18 \leq f(8) - f(2) \leq 30$.
(2) If c is number which satisfies the conclusion of the Mean Value Theorem for the function $f(x) = \sin^{-1}(\frac{x}{2})$ on the interval $[0, 2]$, then find the value of $\pi^2 c^2 + 16$.