NAME: S.No.   ID:
Maximum Marks: 7.5   Section: 14   Time Allowed: 25 minutes

(1) Find $\lim_{x \to 1} \Big((x - 1) \coth(\ln x) \Big)$.

(2) Let $f(x) = x^4 - 4x^3 + 10$

(a) Find the interval on which f is increasing and decreasing.

(b) Find where the graph of f is concave upward and where it is concave downward.