

The Islamic University Of Gaza
Department of Mathematics
Calculus A (Math A1401)

Date: 18/12/2002

Second Midterm Exam

Time: 60 Minutes

	Q.1	Q.2	Q.3	Q.4	Total
	15	15	15	15	60

Answer the following questions:

- Q.1** Find the intervals in which $f(x) = x^5 + x^3 + 2x + 3$ is increasing, decreasing, concave up, and concave down.

Q.2 Find the absolute extreme values of $f(x) = x^{5/3}$ on the interval $[-1, 8]$.

Q.3 Find the area of the region between the curve $y = x^2 + 2x - 3$ and the x -axis from $a = -3$ to $b = 2$.

Q.4 (a) Find $\frac{dy}{dx}$ if $y = \int_x^{\tan x} \frac{dt}{1+t^2}$

(b) Find all the asymptotes of $f(x) = \frac{(x-1)^3}{x^2-3x+2}$