	MCQS
Q1	The function $f(x)=x^4-62x^2+ax+9$ attains its maximum value at x=1, on the interval [0,2]. The value of a is (a)20 (b)-120 (c)120 (d)52
Q2	The function $f(x)=x^x$ is decreasing in the interval:. (a) (0,e) (b) (0,1/e) (c) (0,1) (d) none of these
Q3	The volume of a cube is increasing at the rate of 8 cm^3/s. Find the rate at which its side is increasing when length of side is 12 cm. (a) 1/32 (b) 1/16 (c) 2/9 (d) 1/48
Q4	For the curve $y=5x-2x^3$,if x increases at the rate of 2 units/sec, then at x=3 the slope of curve is changing at _____ units/sec (a)-72 (b)-36 (c)24 (d)48
Q 5	The function f(x)=tan x-x (a)always increases (b)always decreases (c)never increases (d) sometimes increases and sometimes decreases
Note:	For Q No 6 to 10 use separate sheet to solve and attach with worksheet.
Q 6	Find the maximum and minimum values , if any , of the function $f(x) = - |x+1| + 3$

Q 7	Find the interval on which the function $f(x)= 2x^3+9x^2+12x-1$ is decreasing .
Q 8	Find the point(s) on the curve $y=x^2$, at which y coordinate is changing six times as fast as x coordinate.
Q 9	The length x of a rectangle is decreasing at the rate of 5 cm/minute and the width y is increasing at the rate of 4 cm/minute. When $x = 8$ cm and $y = 6$ cm, find the rates of change of (a) the perimeter, and (b) the area of the rectangle.
Q10	Prove that the volume of the largest cone that can be inscribed in a sphere of radius R is $\frac{8}{27}$ of the volume of the sphere.
	Space for Rough Work