



MATHS

FOR IIT JEE ASPIRANTS OF CLASS 12

FOR MATHS

APPLICATION OF DERIVATIVE

Others

1. If the function $f(x) = x^4 + bx^2 + 8x + 1$ has a horizontal tangent and a point of

inflection for the same value of x then the value of b is equal to -1 (b) 1 (c) 6 (d) -6

A. -2

B. -6

C. 6

D. 3

Answer: null



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2. The function 'f' is defined by

$$f(x) = x^p(1 - x)^q \text{ for all } x \in R, \text{ where } p, q$$

are positive integers, has a maximum value, for

x equal to : $\frac{pq}{p+q}$ (b) 1 (c) 0 (d) $\frac{p}{p+q}$



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3. P is a point on positive x-axis, Q is a point

on the positive y-axis and ' O ' is the origin. If

the line passing through P and Q is tangent

to the curve $y = 3 - x^2$ then find the

minimum area of the triangle OPQ , is 3 (b) 4

(c) 5 (c) 6



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4. Equation of a tangent to the curve

$y \cot x = y^3 \tan x$ at the point where the

abscissa is $\frac{\pi}{4}$ is (a) $4x + 2y = \pi + 2$ (b)

$4x - 2y = \pi + 2$ (c) $x = 0$ (d) $y = 0$



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