MIDTERM EXAMINATION

MTH101- Calculus And Analytical Geometry (Session - 2)

Question No: 1 (Marks: 1) - Please choose one

The set of rational number is a subset of

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- Odd integers
- Real number
- Integers
- Natural numbers

Question No: 2 (Marks: 1) - Please choose one

If n-5 is an even integer, what is the next larger consecutive even integer?

- n-2
- n-4
- n-7
- n-3

Question No: 3 (Marks: 1) - Please choose one

$(a-\delta, a)\cup(a, a+\delta)$ Can also be written as

- $0<|x-a|<\delta$

► $0 > |x - a| > \delta$

► $0 > |x - a| > \delta + 1$

► None of these

Question No: 4 (Marks: 1) - Please choose one

$\lim_{x \to 0} \frac{\sin x}{x}$ Equals to

► 1

► 2

► 3

► 0

Question No: 5 (Marks: 1) - Please choose one

$\frac{d}{dx}[\cos ecx] = -----$

► None of these

► $\frac{-\cos x}{1-\cos^2 x}$

► $\frac{\cos x}{1-\cos^2 x}$

$$\frac{1}{1-\cos^2 x}$$

►

Question No: 6 (Marks: 1) - Please choose one

$$\frac{d}{dx}[sex] = - - - - -$$

$$\frac{\sin x}{1-\sin^2 x}$$

►

$$\frac{-\sin x}{1-\sin^2 x}$$

►

$$\frac{1}{1-\sin^2 x}$$

►

► None of these

Question No: 7 (Marks: 1) - Please choose one

If g is differentiable at a point x and f is differentiable at a point g(x), then the ---------- is differentiable at point x .

► Composition f (g(x))

► Product f (g(x))

► Composition f (g(x+f))

► None of these

Question No: 8 (Marks: 1) - Please choose one

$\frac{d}{dx}[f(g(x))] =$

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- $f'(g(x)).g'(x)$
- $f'(g(x)) + g'(x)$
- $f'(g(x)).f'(x)$
- None of these

Question No: 9 (Marks: 1) - Please choose one

The base of the natural logarithm is

- 2.71
- 10
- 5
- None of these

Question No: 10 (Marks: 1) - Please choose one

The set $\{x : a \leq x \leq b\}$ can be written in the form of interval

- (a,b)
- [a,b]
- (a,b]

► None of these

Question No: 11 (Marks: 1) - Please choose one

The set of all points in the coordinate plane which are at a fixed distance away from a given fixed point represents

► Parabola

► Straight line

► Circle

► None of these

Question No: 12 (Marks: 1) - Please choose one

For a graph to be symmetric about x-axis means, for each point (x,y) on the graph,the point ---------- is also on the graph

► (x,-y)

► (-x,y)

► (-x,-y)

► None of these

Question No: 13 (Marks: 1) - Please choose one

The equation of line of the form $y - y_1 = m(x - x_1)$ is known as

► Slope intercept form

► Point-slope form

► Two points form


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