

MTH-101 Final Term Exams Preparation Virtual University

Sr	Questions	Answers Choice
1	Which operation can not be applied on the function?	A. Subtraction B. Cross Product C. Addition D. Composition
2	Function f is differentiable function if it is differentiable on the interval	A. $(-\infty, \infty)$ B. (a, ∞) where a is any negative integer C. $(0, \infty)$ D. None of these
3	Consider the following function $h(x)$ and a constant c then $\frac{d}{dx}(c)h(x)=$	A. 0 B. $\frac{d}{dx}h(x)$ C. $\frac{d}{dx}h(cx)$ D. $c\frac{d}{dx}h(x)$
4	$\log_b 1/t =$ _____	A. $\log b < \log t$ B. $1 - \log b < \log t$ C. $1 + \log b < \log t$ D. $-\log b < \log t$
5	Suppose that f and g are differentiable function of x then $\frac{d}{dx}[f][g]=$	A. $[f'] [g] - [f] [g'] / g^2$ B. $[f'] [g']$ C. $[f'] [g] + [f] [g']$
6	The set $\{x: a \leq x \leq b\}$ can be written in the form of interval ?	A. (a, b) B. $(a, b]$ C. $[a, b]$
7	For a sequence $\{a_n\}$ if the ration of successive terms $a_{n+1}/a_n < 1$ then the sequence is known as :	A. increasing B. decreasing C. Non increasing D. non decreasing
8	$\log_b 1/c =$ _____?	A. $\log b < \log c$ B. $1 - \log b < \log c$ C. $-\log b < \log c$ D. $1 + \log b < \log c$
9	The graph $x=y^2$ is symmetric about _____ axis?	A. X-axis B. Y-axis C. Origin
10	If f is a twice differentiable function at stationary point x_0 $f''(x_0) < 0$ then f has relative _____ At x_0	A. Minima B. Maxima C. None of these
11	For a function f , let $f'(x_n)=0$ for some n Does the newton method for work for approximating the solution of $f(x)=0$	A. yes B. no C. not sure
12	_____ is the special case of Taylor's Theorem	A. Roll's theorem B. Picard Method C. Integration
13	An object is displaced 1m by a force of 1N then the work done	A. 2 B. 1 C. 0
14	If f and g are continuous function on an interval $[a, b]$ $f(x) \geq g(x)$ for $a \leq x \leq b$ and ,then area is bounded by the lines parallel to :	A. X-axis B. Y axis C. Both x and y axis

15	30°	<p>size: small;">>$\pi/3$ B. >$\pi/4$ C. >$\pi/6$</p>
16	If $f(x)=e^{-x}$ at $x=0$ be the Taylor series, then which of the following is also true?	<p>A. Arithmetic Series B. Maclaurin Series C. Geometric Series D. Harmonic Series</p>
17	For a sequence $\{a_n\}$ if the difference between successive terms $a_{n+1}-a_n \leq 0$ then the sequence is known as	<p>A. increasing B. decreasing C. non decreasing D. non increasing</p>
18	Suppose that we apply Newton method to approximate the real solution of the equation $x^3-2x^2-1=0$ if we start at $x_1=2$, then which of the following is value of x_2 ?	<p>A. 6 B. 2.25 C. 0 D. 2</p>
19	Let a function be defined on an interval and let x_1 and x_2 denote two distinct points in that interval, If $f(x_1)=f(x_2)$ for all points x_1 and x_2 then which of the following statement is correct?	<p>A. f is decreasing function B. f is increasing function C. f is constant function</p>
20	$\tan(x)$ is continuous everywhere except at points	<p>A. >$+\pi k$ B. >$+\pi/2$ where $k=(1,3,5,\dots)$ C. >$+\pi k$ D. >$+\pi/2$ where $k=(1,2,3,4,5,6,\dots)$</p>