# MTH-101 Final Term Exams Preparation Virtual University

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | If f is a twice differentiable function at stationary point $x_o$an $f'(x_o) < 0$ then f has relative _____ At $x_o$ | A. Minima<br>B. Maxima<br>C. None of these |
| 2 | If f is a twice differentiable function at stationary point $x_o$an $f'(x_o) > 0$ then f has relative _____ At $x_o$ | A. None of these<br>B. Maxima<br>C. Minima |
| 3 | If the geometric series $a+ar+ar^2+ar^3.....+ar^{k-1}$ which of the following is true for the given series | A. converges<br>B. Diverges<br>C. Give no information |
| 4 | $\log_b 1/t$ =_____ | A. log<sub>b</sub>t<br>B. 1-log<sub>b</sub>t<br>C. 1+log<sub>b</sub>t<br>D. -log<sub>b</sub>t |
| 5 | The lim $x \to a$ f(x)=___ where f(x)=k<br>The k is constant | A. K+1<br>B. K+2<br>C. k |
| 6 | If a quantity y depends on another quantity x in such a way that each value of x determines exactly one value of y ,we say that y is ____ of x | A. relation<br>B. function<br>C. not a function<br>D. not a relation |
| 7 | If a slope m of a nonvertical line is m=1 then the angle of inclination of the line is | A. π /4<br>B. π /2<br>C. π /5 |
| 8 | If a function g is differentiable at a point x and function f is differentiable at a point g(x),then the __ is differentiable a point x. | A. Composition (fog)<br>B. Quotient f/g<br>C. product f.g<br>D. Sum (f+g) |
| 9 | According to the power rule of differentiation,if $f(x)=x^n$where n is a real number then $d/dx[x^n]=$ | A. x<sup>n-1</sup><br>B. nx<sup>n-1</sup><br>C. nx<sup>n+1</sup> |
| 10 | For a function f(x) to be continuous on interval (a,b) the function must be continuous | A. At all point in (a,b)<br>B. Only at point a,b<br>C. At mid point of a and b<br>D. None of these |