9 Lecture - MTH101

Important Mcqs

1. **What is the limit of f(x) as x approaches 3 for the function f(x) = x + 2?**
   a) 3
   b) 5
   c) 6
   d) None of the above

Solution: b) 5

2. **What is the limit of f(x) as x approaches infinity for the function f(x) = 1/x?**
   a) 0
   b) 1
   c) infinity
   d) None of the above

Solution: a) 0

3. **What is the limit of f(x) as x approaches 2 for the function f(x) = (x-2)/(x+4)?**
   a) 2
   b) 0
   c) 1
   d) None of the above

Solution: b) 0

4. **What is the limit of f(x) as x approaches -3 for the function f(x) = |x+3|?**
   a) -3
   b) 0
   c) 3
   d) None of the above

Solution: c) 3

5. **What is the limit of f(x) as x approaches 0 for the function f(x) = sin(x)/x?**
   a) 1
   b) 0
   c) -1
   d) None of the above

Solution: a) 1

6. **What is the limit of f(x) as x approaches 4 for the function f(x) = (x-4)/(x^2-16)?**
   a) 1/12
   b) 1/4

c) 1/8
d) None of the above

Solution: b) 1/4

7. **What is the limit of f(x) as x approaches -infinity for the function f(x) = e^x?**
   a) 0
   b) -1
   c) infinity
   d) None of the above

Solution: a) 0

8. **What is the limit of f(x) as x approaches 1 for the function f(x) = (x-1)/(x^2-1)?**
   a) -1/2
   b) 1/2
   c) 1
   d) None of the above

Solution: b) 1/2

9. **What is the limit of f(x) as x approaches 2 for the function f(x) = (x^2-4)/(x-2)?**
   a) 2
   b) 0
   c) 4
   d) None of the above

Solution: c) 4

10. **What is the limit of f(x) as x approaches 0 for the function f(x) = (1-cos(x))/x^2?**
    a) 0
    b) 1/2
    c) infinity
    d) None of the above

Solution: b) 1/2