8 Lecture - MTH101

Important Mcqs

1. **Which axis represents the independent variable or input values in a graph?**
   a. x-axis
   b. y-axis
   c. origin
   d. none of the above

Answer: a. x-axis

2. **What is the purpose of graphing functions?**
   a. To visualize the behavior of a function
   b. To solve equations
   c. To memorize formulas
   d. None of the above

Answer: a. To visualize the behavior of a function

3. **How do we find the x-intercepts of a function?**
   a. Set the function equal to zero and solve for x
   b. Set x equal to zero and solve for y
   c. Take the derivative of the function
   d. None of the above

Answer: a. Set the function equal to zero and solve for x

4. **Which type of function has a minimum at its vertex with a positive leading coefficient?**
   a. Even-degree functions
   b. Odd-degree functions
   c. Both even-degree and odd-degree functions
   d. None of the above

Answer: a. Even-degree functions

5. **Which type of function has a maximum at its vertex with a negative leading coefficient?**
   a. Even-degree functions
   b. Odd-degree functions
   c. Both even-degree and odd-degree functions
   d. None of the above

Answer: a. Even-degree functions

6. **Which type of function is symmetric about the y-axis?**
   a. Even functions
   b. Odd functions

c. Both even and odd functions
d. None of the above

Answer: a. Even functions

7. **Which type of function is symmetric about the origin?**
   a. Even functions
   b. Odd functions
   c. Both even and odd functions
   d. None of the above

Answer: b. Odd functions

8. **What are the critical points?**
   a. The points where the function is equal to zero
   b. The points where the derivative is equal to zero or does not exist
   c. The points where the function intersects the y-axis
   d. None of the above

Answer: b. The points where the derivative is equal to zero or does not exist

9. **How do we determine the location of local extrema?**
   a. We test the sign of the derivative on either side of the critical point
   b. We test the sign of the second derivative on either side of the critical point
   c. We set the derivative equal to zero and solve for x
   d. None of the above

Answer: a. We test the sign of the derivative on either side of the critical point

10. **How do we determine the location of inflection points?**
    a. We test the sign of the derivative on either side of the critical point
    b. We test the sign of the second derivative on either side of the critical point
    c. We set the second derivative equal to zero and solve for x
    d. None of the above

Answer: b. We test the sign of the second derivative on either side of the critical point