# 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