# 7 Lecture - MTH101

## **Important Subjective**

#### 1. What is the domain of a function?

**Answer:** The domain of a function is the set of all input values (or independent variables) for which the function is defined.

## 2. What is the range of a function?

**Answer:** The range of a function is the set of all output values (or dependent variables) that the function can produce.

3. What is the difference between a composite function and a simple function?

**Answer:** A simple function is a function that consists of a single equation, while a composite function is a function that is formed by combining two or more functions.

#### 4. What is the inverse of a function?

**Answer:** The inverse of a function is a new function that reverses the operation of the original function.

5. What is the difference between a one-to-one function and a many-to-one function?

**Answer:** A one-to-one function is a function that maps each element of the domain to a unique element of the range, while a many-to-one function is a function that maps multiple elements of the domain to a single element of the range.

#### 6. What is the composition of functions?

**Answer:** The composition of functions is the process of combining two or more functions to create a new function.

#### 7. What is the difference between a domain and a codomain?

**Answer:** The domain of a function is the set of all input values, while the codomain is the set of all possible output values.

#### 8. What is a linear function?

**Answer:** A linear function is a function that can be represented by a straight line on a graph.

### 9. What is a polynomial function?

**Answer:** A polynomial function is a function that can be represented by a polynomial equation, which is an equation that involves only addition, subtraction, and multiplication of variables raised to whole number powers.

### 10. What is the difference between an even function and an odd function?

**Answer:** An even function is a function that is symmetric about the y-axis, meaning that f(x) = f(-x) for all values of x. An odd function is a function that is symmetric about the origin, meaning that f(x) = -f(-x) for all values of x.