## 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 $x$.

