Roll No: 18

Question 1: Why is C called the Mother of all Languages?

Answer: C is one of the most widely used programming languages and C compilers are available for all operating systems. It is a procedural, structured and mid-level programming language and provided new concepts like variables, data type, loops, array, function, dynamic memory allocation and pointer are used in many modern language.

C is known as a mother language because most of the compilers and Java Virtual Machines (JVMs) are written in C language. And most of the languages which are developed after C language has borrowed heavily from it like C++, Python, Rust, JavaScript, Go, C#, PHP, Perl, LPC, Verilog etc.

Question 2: Explain C is structured programming.

Answer: In C programming when we writing a program we add preprocessor directive #inclue <filename>, than functions like main (), then opening of braces { }, inside the braces there are two parts declaring of variables and execution of statements which is a step by step process and well structured so anyone in the first look can understand what codes are doing what in which section. The structured programming languages allows the program to be split into multiple blocks of execution. In C, we can split the program into functions. That is why it is called a structured programming language.

Question 3: Why is C not an object-oriented programming language?

Answer: Object oriented languages are handy for creating applications that involve discrete entities which send messages to one another to get work done. C is good at efficient memory usage and direct communication with physical hardware, like hardware, disk drives and network ports.

C is not an object oriented language because it has no concept of classes, objects, polymorphism, and inheritance. The confusion may be that C can be used to implement object oriented concepts like polymorphism, encapsulation, etc. C is a high-level and general-purpose programming language that is ideal for developing firmware or portable applications.