# 20 Lecture - CS201

## **Important Subjective**

## 1. What is a structure in programming?

Answer: A structure is a user-defined data type that allows a programmer to group together related variables of different data types under a single name.

## 2. How do you declare a structure in C programming?

Answer: A structure is declared using the keyword "struct" followed by the name of the structure and the members enclosed in curly braces. For example:

```
struct student {
char name[20];
int age;
float marks;
}:
```

#### 3. What is the difference between a structure and a union?

Answer: A structure is a user-defined data type that allows a programmer to group related variables of different data types, while a union is a user-defined data type that allows a programmer to define a variable that can hold different data types at different times.

## 4. How are the members of a structure accessed in C programming?

Answer: The members of a structure are accessed using the dot (.) operator. For example: struct student s; s.age = 20;

5. Can structures be passed as arguments to functions?

Answer: Yes, structures can be passed as arguments to functions in programming.

6. How can you assign values to the members of a structure in C programming?

Answer: The members of a structure can be assigned values using the dot (.) operator. For example:

```
struct student s;
s.age = 20;
s.marks = 85.5;
```

#### 7. Can a structure have a pointer as a member?

Answer: Yes, a structure can have a pointer as a member in programming.

8. What is the purpose of typedef in C programming with regards to structures?

Answer: The purpose of typedef in C programming is to create an alias or alternate name for a structure, making it easier to use in code. For example:

```
typedef struct {
  char name[20];
  int age;
  float marks;
  } student;
```

## 9. How can you access the members of a structure using a pointer?

Answer: The members of a structure can be accessed using a pointer using the arrow (->) operator. For example: struct student \*ptr; ptr->age = 20;

## 10. What is the difference between a structure and an array of structures?

Answer: An array of structures is a collection of structures of the same type stored in contiguous memory locations, while a structure is a single instance of a user-defined data type.