

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.