

## Recently Asked coding interview questions by Infosys

### 1. What is a pointer in C? What is its use?

A pointer in C is a variable that stores the memory address of another variable. It is used to directly access and manipulate memory locations, enabling dynamic memory allocation, arrays, functions, and data structures like linked lists.

### 2. Difference between C & embedded C

Standard C is a general-purpose programming language, while Embedded C is an extension of C for programming embedded systems. Embedded C has specific libraries and hardware access methods to interact directly with microcontroller registers and devices.

### 3. Explain the most recent project you have worked on (from resume).

(Answer varies based on individual experience; focus on the project's objective, your role, technologies used, challenges faced, and impact or outcome.)

### 4. Write a program to decide whether the input number is a perfect number or not.

```
#include <stdio.h>
```

```
int main() {
```

```
    int num, sum = 0;
```

```
    printf("Enter a number:");
```

```
    scanf("%d", &num);
```

```
    for (int i = 1; i < num; i++) {
```

```
        if (num % i == 0) {
```

```
            sum += i;
```

```
        }
```

```
    }
```

```
If (sum == num) {  
    Printf("%d is a perfect number.\n", num);  
} else {  
    Printf("%d is not a perfect number.\n", num);  
}  
Return 0;  
}
```

## **5. Give different modulation techniques.**

Some common modulation techniques include Amplitude Modulation (AM), Frequency Modulation (FM), Phase Modulation (PM), Quadrature Amplitude Modulation (QAM), and Pulse Code Modulation (PCM).

## **6. What is a Real-Time OS?**

A Real-Time Operating System (RTOS) is designed to handle tasks in a timely and predictable manner, crucial for systems requiring immediate responses, such as embedded systems in medical, automotive, and industrial applications. It prioritizes tasks to ensure time-critical operations are executed within defined time constraints.

## **7. What is an implicit cursor?**

In databases, an implicit cursor is a cursor automatically created by the database when an SQL query (like SELECT or DML) is executed. Unlike explicit cursors that must be declared by the user, implicit cursors are used to handle single-row queries and manage memory automatically.

## **8. What is a Zener diode? What is its use?**

A Zener diode is a type of diode that allows current to flow in the reverse direction when a specific breakdown voltage is reached. It is commonly used for voltage regulation, protecting circuits by maintaining a stable voltage level across sensitive components.

