Q1) Based on the lecture, what is the definition of an embedded system?

An **embedded system** is a **special-purpose computer system** built inside a device to perform a **specific task**. It consists of hardware and software designed to control or monitor a particular function.

Q2) How does an embedded system (washing machine) differ from a laptop or mobile phone?

A washing machine uses an embedded system to perform **only one fixed function** (washing control), while a laptop or mobile phone is a **general-purpose system** that can run many applications like browsing, gaming, editing, etc.

Q3) List the five basic components of an embedded system mentioned in the lecture.

The five basic components are:

1. **Input**
2. input
3. **input input**
4. **input**

Q4) Name four real-life examples of embedded systems discussed in class.

Four real-life examples are:

- **Washing machine**

- **Microwave oven**
- **ATM machine**
- **Traffic light control system**

Q5) What are two common characteristics of embedded systems, and one major limitation they face?

Two characteristics:

- They are designed for a **specific dedicated task**
- They are **small, fast, and efficient**

One major limitation:

- They have **limited memory and processing power**, so they cannot perform heavy multitasking like a laptop.