

## Assingment/Quize-2

NAME: NIAMUL HASAN

ID : 17201026

Section: A

Course code: CSE 315

Q.1 | Ans:

The L293D is a popular 16-Pin Motor Driver IC. As the name suggests it is mainly used to drive motors.

Now, a single L293D IC is capable of running two DC motors at the same time. Also the direction of these two motors can be controlled independently.

Now the importance of L293D;

1. This L293D Motor driver IC is important when we need to drive high current

Motors using Digital Circuits.

2. To drive stepper motors this IC is important.

3. This IC is important to drive the high current LED's.

4. This L293D IC is important when we want Latching Relay.

Now about relay module:

Basically, a relay is a switch. It is an electrically operated switch that can be turned on or off, letting the current go through or not.

Now if I talk about the importance of relay module; then the relay is

important in controlling the AC devices using a much smaller DC current. Here commonly used relay is single pole Double Throw relay (SPDT relay).

Relay is also important to control high voltage electronic devices easily.

Q.2/Ans:

IOT:

The Internet of things (IOT), refers to the billions of physical devices around the world that are now connected to the internet, all collecting and sharing data.

Basically, IOT is a system of

interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UID) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

Now some of the application of IOT in modern life with examples are:

1. Transportation and logistics domain.  
Example: Autonomous cars
2. Healthcare domain.  
Example: Remote Patient Condition check
3. Smart environment at home, Office, plant.  
Example: Google Home.
4. Personal and social Domain.  
Example: Smart Watch/Auto updating activities

in social media.

5. Enterprise.

Example: Environmental Monitoring

6. Utilities.

Example: Smart Meter By Electricity supply company.

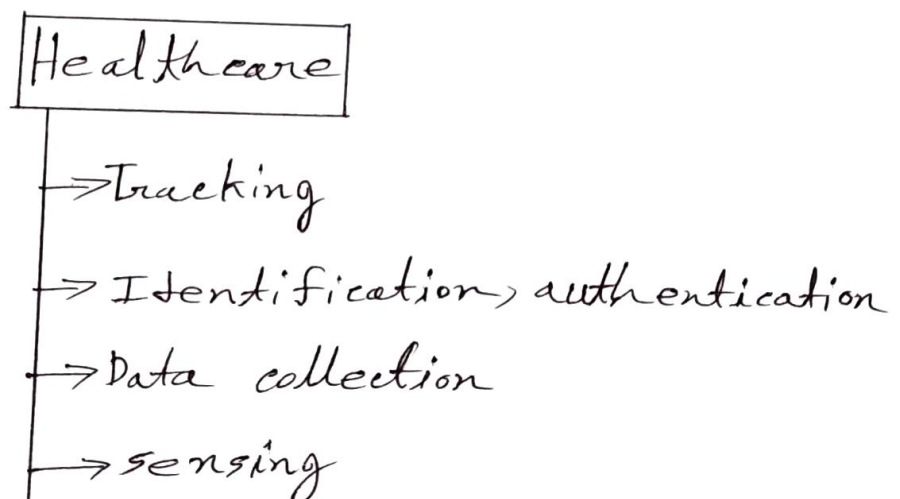
7. Futuristic Application Domain.

Example: Enhanced Game Room.

Q.3 | Ans:

Here I will use healthcare domain.

Now, the benefits provided by the IOT technology to the healthcare domain and the resulting applications can be grouped mostly into: tracking of objects and people, identification and authentication of people, automatic data collection and sensing.





## Tracking :

Tracking includes real-time position finding, such as the case of patient-flow monitoring to improve workflow in hospitals, and tracking of motion through choke points, such as access to designated areas.

## Identification and authentication:

Identification and authentication is most frequently used to grant access and to improve employee morale by addressing patient safety issues. It also includes patient identification to reduce incidents harmful to patients, comprehensive and current electronic medical record maintenance.

## Data collection:

Automatic data collection and transfer is mostly aimed at reducing from processing time, process automation, automated care and procedure auditing, and medical inventory management.

## Sensing:

Sensor devices enables function centered on patients, and in particular on diagnosing patient conditions, providing real-time information on patient health indicators.