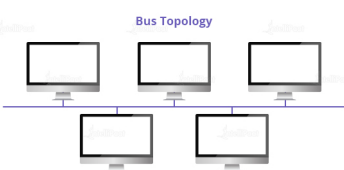
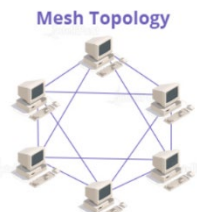
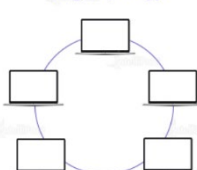

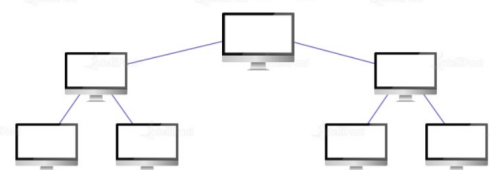
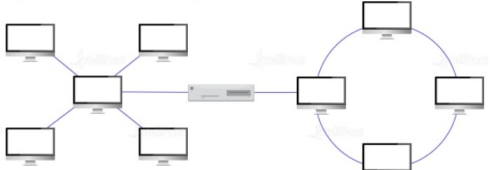


**Internal Assessment Test 1 – Jan 2023**

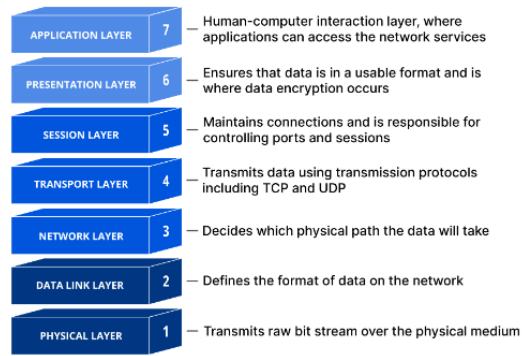
<b>Sub:</b>	IOT & Wireless Sensor Networks	<b>Sub Code:</b>	18EC741	<b>Branch:</b>	
<b>Date:</b>	24/01/2023	<b>Duration:</b>	90 min's	<b>Max Marks:</b>	50
		<b>Sem/Sec:</b>	I /		
<b>Answer any FIVE FULL Questions</b>					
1	<p>Explain the different connection types and network topologies in detail.</p> <p>Bus Topology: All nodes connect to a common linear cable called bus.                      Ring Topology: All nodes connect to a circular cable called ring.                      Mesh Topology: Every node connects to multiple nodes.                      Star Topology: All nodes connect to a common central hub.                      Hybrid Topology: Combination of two or more topologies.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>Bus Topology</b></p>  </div> <div style="text-align: center;"> <p><b>Mesh Topology</b></p>  </div> <div style="text-align: center;"> <p><b>Ring Topology</b></p>  </div> <div style="text-align: center;"> <p><b>Star Topology</b></p>  </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;"> <p><b>Tree Topology</b></p>  </div> <div style="text-align: center;"> <p><b>Hybrid Topology</b></p>  </div> </div>	10	CO1	L2	
2	<p>Explain the classification of sensors in detail</p> <p><b>Classification of Sensors</b>                      Sensors are classified on the basis of the output signal, physical parameters measured by them, and various other points. Sensors on the basis of the output signal are classified into analog and digital output sensors.</p> <p>The output given by the sensors in the case of analog output sensors is an analog voltage that can be measured and used for determining the required physical parameter. This is done by making use of the sensor's transfer function. It may be resistive, capacitive, or anything which is analog.</p> <p>The digital data which can be read via parallel or serial communication buses is the output of digital output sensors. The format for the data, in this case, is demonstrated in the sensor's datasheet. An accelerometer sensor is an example of a digital sensor that is used for sending the output data by using the I2C two-wire bus.</p>	10	CO2	L2	

3 Explain layers of OSI model in detail with a neat diagram

10

CO1

L2



The Open Systems Interconnection (OSI) model describes seven layers that computer systems use to communicate over a network. It was the first standard model for network communications, adopted by all major computer and telecommunication companies in the early 1980s

The modern Internet is not based on OSI, but on the simpler TCP/IP model. However, the OSI 7-layer model is still widely used, as it helps visualize and communicate how networks operate, and helps isolate and troubleshoot networking problems.

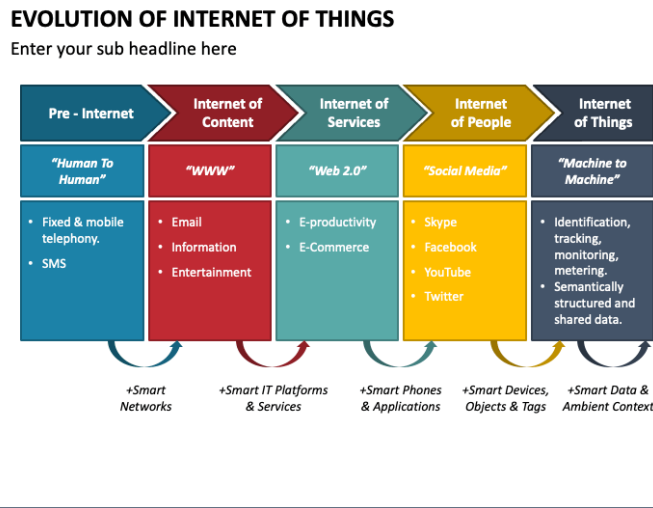
OSI was introduced in 1983 by representatives of the major computer and telecom companies, and was adopted by ISO as an international standard in 1984.

4 With a neat diagram explain the evolution of IOT

10

CO1

L2

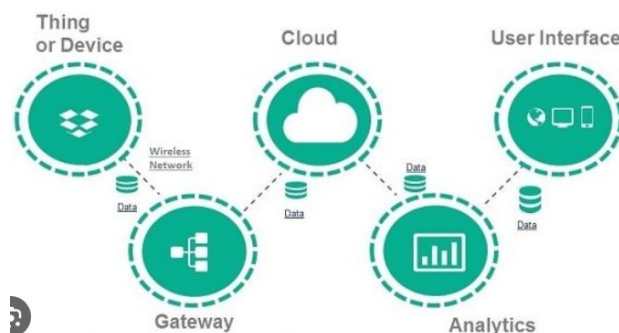


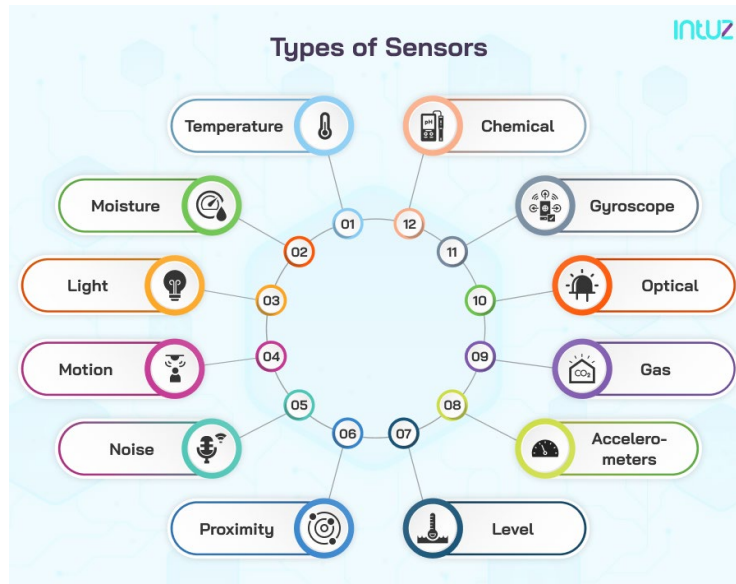
5 With a neat diagram IoT networking components

10

CO1

L2





Sensors or transducers represent physical devices that convert one form of energy into another. Sensors convert a physical device into an electrical impulse to take the desired action. For instance, sensors in an ambient light system will measure the brightness of the light by turning it into an electrical signal.

These sensors have a wide array of applications in the IoT network. As they obtain the parameters of a physical object, the output of their observation is converted into resistance, capacitance, impedance, etc.