

CS115504
BTech (Fifth Semester) Examination
April-May 2024
[CSE , DS, IOTCBCT]

Internet of Things

Time Allowed: 3 Hours

Maximum Marks: 100

Minimum Marks: 35

Note: Attempt all questions. Part (a) from each question is compulsory and carries 4 marks, attempt any two parts from part (b), (c) and (d) carrying 8 marks each.

On successful completion of the course, the student will be able to:

CO1. Students will familiar with the concepts of internet of Things.

CO2. Students will familiar with IoT Architecture

CO3. Students will ready to Analyze basic protocols in wireless sensor network

CO4. Students will be capable to design IoT applications in different domain and be able to analyze their performance

CO5. Capable to implement basic IoT applications on embedded platform

Q. No	Questions	Marks	CO	BL	PI
Q.1	a What do you mean by internet of things?	4	CO1	L2	1.3.1
	b Explain architecture of IOT with suitable diagram.	8	CO1	L2	1.3.1
	c Write down difference between M2M & IOT.	8	CO1	L5	1.3.2
	d Write short notes on : (1) IOV (2) Big Data	8	CO1	L5	1.3.2
Q.2	a What do you mean by Gateways?	4	CO2	L2	2.1.2
	b Write a brief note on Data protocols used in IOT.	8	CO2 CO3	L4	2.1.2
	c Write down difference between Zigbee & Bluetooth.	8	CO2 CO3	L4	2.1.2
	d Write short notes on (1) ZWave (2) RFID	8	CO2	L4	2.1.2
Q.3	a What do you mean by sensors & sensing?	4	CO3	L2	2.2.2
	b Write a brief note on Accelerometers &		CO3	L2	2.2.3

	Temperature sensors.	8			
	c What do you mean by Actuation? Explain Pneumatic & SMP actuators.	8	CO3	L5	2.2.3
	d Write Short notes on (1) Solenoid (2) Stepper motor.	8	CO3	L5	2.2.3
Q.4	a What do you mean by Arduino?	4	CO3	L5	1.4.1
	b Explain various components of NodeMCU.	8	CO3	L2	1.4.1
	c Write a sketch to calculate distance using ultrasonic sensor.	8	CO4	L4	1.4.1
	d Explain Raspberry Pi in detail.	8	CO5	L4	1.4.1
Q.5	a Define cloud computing.	4	CO4	L4	2.2.3
	b Explain service models of cloud in detail.	8	CO4	L5	2.2.3
	c Write down difference between Multi cloud & Inter cloud.	8	CO5	L2	2.2.3
	d Write short notes on (1) Open Stack (2) Amazon EC2	8	CO5	L4	2.2.3

CO- Course Outcomes, BL- Bloom Taxonomy, PI- Performance Indicator