



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

BTECH**(SEM V) THEORY EXAMINATION 2024-25****IOT – ARCHITECTURE, COMMUNICATION, TECHNOLOGY & ITS APPLICATIONS****TIME: 3 HRS****M.MARKS: 70****Note:** Attempt all Sections. In case of any missing data, choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 07 = 14**

Q no.	Question	CO	Level
a.	Enumerate the term Internet.	1	K1
b.	Enumerate the meaning of Digital to Analog Conversion in any IoT system.	2	K1
c.	Enumerate the term Protocols.	3	K1
d.	Determine the use of DAC Sensors.	4	K3
e.	Discuss the term Smart Objects.	5	K2
f.	Clarify the term Database Management.	1	K2
g.	Outline the functions of the data plane.	2	K1

SECTION B**2. Attempt any three of the following: 07 x 3 = 21**

a.	Demonstrate the types of Data for processing in IoT systems.	1	K3
b.	Explain the types of sensors.	2	K2
c.	Interpret the functions associated with Zig-Bee and Bluetooth Protocol.	3	K5
d.	Demonstrate the block diagram for the Arduino board.	4	K3
e.	Explain the functions and structure of Big Data in IoT.	5	K4

SECTION C**3. Attempt any one part of the following: 07 x 1 = 07**

a.	Explain the IoT architecture with examples.	1	K2
b.	Discuss the terms: Data Plane, Simulation, AI, Internet, and Ecosystem.	1	K2

4. Attempt any one part of the following: 07 x 1 = 07

a.	Demonstrate Network Functions Virtualization Network associated with IoT system.	2	K3
b.	Demonstrate IoTivity stack architecture.	2	K3

5. Attempt any one part of the following: 07 x 1 = 07

a.	Explain different Short Range Wireless Communication Protocols.	3	K5
b.	Interpret the functions associated with SCADA Protocol.	3	K5

6. Attempt any one part of the following: 07 x 1 = 07

a.	Dictate interfacing of the Motion Detector sensor with Raspberry Pi.	4	K6
b.	Dictate interfacing of the Humidity sensor with Raspberry Pi.	4	K6

7. Attempt any one part of the following: 07 x 1 = 07

a.	Demonstrate a case study for a home security system with Fingerprint detection and person counting functions with Sensors used and a block diagram.	5	K3
b.	Customize a case study for an Industry automation system for pressure checking and ON/OFF functions of a Gas Pipeline with Sensors used and a block diagram.	5	K3