PAPER ID-310989

Subject Code: BCS070

Roll No: | | | | | | | | | | | | | |

BTECH

(SEM VII) THEORY EXAMINATION 2025-26

INTERNET OF THINGS

TIME: 3 HRS **M.MARKS: 70**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 7 = 14**

Q no.	Question	Marks	CO
a.	Define Internet of Things (IoT).	2	1
b.	State any two differences between IoT and M2M communication.	2	1
c.	Define sensors used in IoT systems.	2	2
d.	What is RFID technology?	2	2
e.	Define data aggregation in IoT networks.	2	3
f.	What is Arduino IDE?	2	4
g.	State any two security challenges in IoT systems.	2	5

SECTION B

2. Attempt any *three* of the following: **7 x 3 = 21**

a.	Explain the vision, definition, and conceptual framework of Internet of Things (IoT).	7	1
b.	Explain the role of sensors and actuators in IoT systems with examples.	7	2
c.	Explain wireless medium access issues in IoT networks.	7	3
d.	Explain the anatomy of Arduino platform board.	7	4
e.	Explain development challenges faced while designing IoT systems.	7	5

SECTION C

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

a.	Explain the architectural view of IoT with a neat diagram.	7	1
b.	Explain IoT/M2M system layers and design standardization.	7	1

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

a.	Explain RFID technology and its role in IoT applications.	7	2
b.	Explain embedded platforms for IoT with reference to Arduino and Raspberry Pi.	7	2

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

a.	Explain data aggregation and dissemination techniques in IoT networks.	7	3
b.	Explain sensor deployment and node discovery in IoT systems.	7	3

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

a.	Explain Arduino IDE and the steps involved in programming Arduino for IoT.	7	4
b.	Explain the structure of an Arduino program with suitable explanation.	7	4

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

a.	Explain security challenges in Internet of Things.	7	5
b.	Explain IoT applications in smart cities and e-health systems.	7	5