PAPER ID-310962

Subject Code: KOT078

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

BTECH
(SEM VII) THEORY EXAMINATION 2023-24
ARCHITECTING SMART IOT DEVICES

TIME: 3 HRS **M.MARKS: 100**

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

SECTION A

1. Attempt *all* questions in brief.

Qno.	Question	Marks	CO
a.	Define IoT.	2	1
b.	Discuss nature to nature computing.	2	1
c.	Briefly classify the sensors.	2	2
d.	Write the difference between sensor and actuator.	2	2
e.	Enlist the advantages of python programming in IoT.	2	3
f.	Define Embedded system.	2	3
g.	Define Scheduling.	2	4
h.	Discuss different types of interrupts used in IoT system.	2	4
i.	What do you mean by tools of IoT?	2	5
j.	Discuss the use of physical layer in IoT architecture.	2	5

SECTION B

2. Attempt any *three* of the following:

a.	Explain the four 4 designing principles while designing the website.	10	1
b.	Write short notes on system hardware and prototyping.	10	2
c.	Discuss the merits and demerits of C and python programming which is used in the embedded system.	10	3
d.	Discuss Nucleus ES in detail.	10	4
e.	Explain the use of chef puppet tools in IoT system. Also mention its applications.	10	5

SECTION C

3. Attempt any *one* part of the following:

a.	Explain the different methods used in data acquiring and analytics in IoT.	10	1
b.	Explain the system architecture in IoT system	10	1

4. Attempt any *one* part of the following:

a.	Enlist and explain the different types of sensors used in IoT.	10	2
b.	Explain the Radio module in detail.	10	2

5. Attempt any *one* part of the following:

a.	Draw and explain the flow chart for smart irrigation system.	10	3
b.	Explain the Temperature controller and its components used in IoT.	10	3

6. Attempt any *one* part of the following:

a.	Explain the different types of interrupts used in nucleus ES.	10	4
b.	Write short notes on Nucleus SE initialization and starn1p.	10	4

7. Attempt any *one* part of the following:

a.	Explain the case study of NETCONF – YANG.	10	5
b.	Explain the basic building blocks of an IoT device and endpoints.	10	5