IANIPAL INSTITUTE OF TECHNOLOGY



End Exam Question Paper

Semester - VII

Department: Electronics and Communication Engineering

Course/Module Code: ECE 4054

Course Title: INTERNET OF THINGS

Session: JULY – DEC 2023

Date: 02-12-2023

Table 1: Distribution	of Marks	against Course	Learning Outcomes

	Course Learning		Marks
CLO Statements	Outcome	AHEP 4	
Explain the broader idea of IoT and trend settings in IoT realization, demonstration.	CLO4054.1	1,2	23
Discuss the key wireless technologies evolved to support the requirements of IoT systems.	CLO4054.2	1,2	13
Define the reference architecture and protocols for IoT echo systems.	CLO4054.3	1,2	29
Mention the trends and transitions happening in cloud landscape to cope with advancements in IoT.	CLO4054.4	1,2,4,5,6	21
Describe various analytical approaches, frameworks, algorithms, platforms, engines, and methods for squeezing out value-adding IoT data.	CLO4054.5	1,2,3,4,5,6	14

SEVENTH SEMESTER BTECH. (E & C) DEGREE END SEMESTER EXAMINATION DEC 2023 SUBJECT: INTERNET OF THINGS (ECE 4054)

TIME: 3 HOURS

MAX. MARKS: 50

- Instructions to candidates
 - Answer **ALL** questions.
 - Missing data may be suitably assumed.

Q. No.	Questions	M*	C *	A *	B*
1A.	In Data analytics, explain in detail about any FOUR quantitative data analysis techniques.	4	5	6	2
1B.	Discuss the benefits of Smart grid.	3	1	1	2

1C.	Explain any FOUR key application areas of IIoT.	3	1	2	2
2A.	Illustrate the working of fog for various time-sensitive data, with help of suitable diagrams.	4	5	5	2
2B.	Describe the concept of sensor-as-a-service using sensor cloud architecture.	3	4	4	2
2C.	Justify the need of fog computing in IoT networks.	3	3	2	2
3A.	With help of necessary diagram, explain the features of various service models in cloud computing.	4	4	5	2
3B.	Discuss the virtualization concept and its types in cloud computing.	3	4	6	2
3C.	What are the features of various types of clouds?	3	4	4	1
4A.	How do you integrate SDN for IoT? Explain with suitable diagrams.	4	3	2	3
4B.	With help of diagrams, discuss the functioning of Open Flow protocol.	3	3	2	2
4C.	Differentiate the features of M2M communications and IoT.	3	3	1	4
5A.	Compare the IoT protocol stack with Web protocol stack.	4	3	1	4
5B.	Why interoperability is essential in IoT networks? Justify.	3	1	1	2
5C.	Differentiate the features of MANETs, VANETs, and UAV networks.	3	1	2	4

M*--Marks, C*--CLO, A*--AHEP LO, B* Blooms Taxonomy Level