



# GIET UNIVERSITY, GUNUPUR - 765022

B. Tech (Sixth Semester Regular) Examinations, May - 2024

## 21BECPE36021 - Internet of Things

(ECE)

Time: 3 hrs

Maximum: 70 Marks

(The figures in the right hand margin indicate marks)

### PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. Mention the Characteristics of IOT	CO1	K2
b. Discuss about Machines in M2M vs Things in IOT	CO1	K1
c. Draw a flow chart showing Process specification of home automation	CO2	K3
d. State any two advantages using Raspberry Pi	CO3	K2
e. What is the main difference between fog computing and cloud computing?	CO4	K1

### PART – B

(15 x 4 = 60 Marks)

Answer **ALL** questions

	Marks	CO #	Blooms Level
2. a. Determine the various communication models that can be used weather. monitoring system. Which is more appropriate model for this system? Describe the pros and cons.	8	CO1	K3
b. Describe an example of IoT service that uses Web Socket-based communication model.	7	CO1	K4
(OR)			
c. Describe an example of IOT service that uses publish- subscribe Communication model.	8	CO1	K5
d. Determine the IoT levels for designing structural health monitoring system	7	CO1	K4
3.a. Differentiate between SDN and NFV?	8	CO2	K3
b. Explain the IOT system Management with NETCONF-YANG.	7	CO2	K4
(OR)			
c. Which limitation makes SNMP unsuitable for IoT system?	8	CO2	K6
d. What is the role of NETCONF server? Explain its implementation using NETOPEER.	7	CO2	K5
4.a. Explain with a simple program to control LED with Raspberry Pi.	8	CO3	K4
b. What is an IoT Device? Explain the basic building blocks of IOT device	7	CO3	K3
(OR)			
c. What is purpose of information model in IOT design methodology	8	CO3	K4
d. What is the uses of SPI and I2C interfaces on Raspberry Pi?	7	CO3	K5
5.a. Describe the architecture of a typical fog computing network and explain how it differs from a traditional centralized network architecture.	8	CO4	K4
b. How does fog computing contribute to reducing network congestion and bandwidth usage in IoT environments?	7	CO4	K4
(OR)			
c. Provide a detailed explanation of one specific application of fog computing in the Smart cities.	8	CO4	K5
d. Discuss the security and privacy concerns associated with fog computing and suggest measures to address them.	7	CO4	K4

--- End of Paper ---