Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)
B. Tech (Fifth Semester - Regular) Examinations, November – 2024
22BELOE35011/22BEEOE35011 – Internet of Things
(EE/EEE)

Time: 3 hrs   Maximum: 70 Marks

Answer ALL questions
(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. Explain the role of network plays in the Internet of Everything.	CO1	K2
b. List the services offered by Cloud Computing.	CO1	K1
c. Explain the superiority of IPv6 over IPv4.	CO2	K1
d. Differentiate between CPU & GPU	CO4	K3
e. Explain conversion of integer to float.	CO3	K3

PART – B   **(15 x 4 = 60 Marks)**

Answer *All* the questions	Marks	CO #	Blooms Level
2. a. Describe an example of an IoT system in which information and knowledge are inferred from data. Why do IOT systems have to be self-adapting and self-configuring?	8	CO1	K2
b. Explain the role of things and Internet in IOT. Explain the role of communication functional block in an IOT system.	7	CO1	K2
(OR)			
c. Briefly explain the communication with REST-based API. Determine the IoT levels for designing home automation IoT systems, including smart lighting and intrusion detection.	8	CO1	K3
d. Determine the IoT levels for designing a structural health monitoring system.	7	CO1	K2
3.a. Explain the difference in data collection and analysis approaches of M2M and IOT. Differentiate between SDN and NFV.	8	CO2	K2
b. List the limitation makes SNMP unsuitable for IoT systems. Explain the difference between configuration and state data.	7	CO2	K2
(OR)			
c. Which communication protocols are used for M2M local area network? What are the differences between Machines in M2M and things in IOT?	8	CO2	K2
d. Describe how NFV can be used for virtualizing IoT devices?	7	CO2	K2
4.a. What is the difference between procedure-oriented programming and object-oriented programming? Describe the use of Python dictionaries, lists, and Tuples.	8	CO3	K3
b. What is the difference between a Python module and a package? How is function overriding implemented in Python?	7	CO3	K2
(OR)			
c. Describe all different steps of IoT Design Methodology.	8	CO3	K3

d.	What is a keyword argument in Python and explain the various conversion types in Python? What are the variable-length arguments?	7	CO3	K3
5.a.	Describe the difference between Raspberry Pi and Desktop computers. Explain the use of SPI and I2C interfaces on Raspberry Pi.	8	CO4	K2
b.	Explain with a simple program to control LED with Raspherry Pi.	7	CO4	K4

(OR)

c.	Explain the usage of GPIO pins in Raspberry Pi.	8	CO4	K2
d.	Explain the Basic building blocks of an IoT Device implemented for basic home automation.	7	CO4	K3

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