QPC: RD20BTECH419 AR 20 Reg. No | | | | | | | | | | |

GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Fifth Semester – Regular) Examinations, December – 2022

BOEEL5060 / BOEEE5060 – 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: (Multiple Choice Questions) **(1 x 10 = 10 Marks)**

Q.1. Answer ***ALL*** questions	[CO#]	[PO#]
a. What is GPIO?	CO4	PO1
(i) Good ports for input and output (ii) General purpose Input/Output		
(iii) Gathered pins for Input/Output (iv) None of the above		
b. _____is the fifth step of the IoT Design Methodology.	CO3	PO3
(i) Information Model (ii) Information Format		
(iii) Service Specification (iv) Function View Specification		
c. _____modules contains the definitions of the configuration data, state data RPC calls.	CO2	PO1
(i) NETCONF (ii) YANG		
(iii) WINK (iv) LINK		
d. The limitations of SNMP make it unsuitable for _____	CO2	PO1
(i) Statistical Management (ii) Configuration Management		
(iii) Transportation Management (iv) Autentication		
e. IoT devices are integrated _____to communicate with each other	CO1	PO1
(i) Interoperable protocols (ii) Self configuration		
(iii) Information Network (iv) Self adapting.		
f. In a _____ communication model the client sends request server and the server responds to the requests.	CO2	PO4
(i) Request -Response (ii) Push-pull		
(iii) Publish-subscribe (iv) Exclusive Pair		
g. Which is the latest Internet Protocol version.	CO1	PO2
(i) IPv2 (ii) IPv4		
(iii) IPv6 (iv) IPv8		
h. The structure of the management data is defined by the _____	CO2	PO1
(i) Unique Identifiers (ii) Object Data		
(iii) Statistical Data (iv) Object Identifiers		
i. The_____provides the functionalities for interacting with instances of concepts defined in the Domain model	CO3	PO2
(i) Functional View (ii) Functional Group		
(iii) Function IoT (iv) Device Group		
j. Rx and Tx pins for communication with____peripherals	CO4	PO2
(i) Parallel (ii) Serial		
(iii) Adjunct (iv) Point to Point		

PART – B: (Short Answer Questions) **(2 x 10 = 20 Marks)**

Q.2. Answer ***ALL*** questions		[CO#]	[PO#]
a.	What does 3 V's (V…,V…..,V….) represent in BIGDATA	CO1	PO1
b.	List any two limitations of conventional network architecture	CO2	PO2
c.	What are the various protocols used in M2M	CO2	PO1
d.	Differentiate between list and Tuple	CO3	PO2
e.	What is the purpose of GPIO pins	CO4	PO4
f.	What are the various protocols used on link layer	CO1	PO1
g.	Mention the Characteristics of IOT	CO1	PO1
h.	Define SDN controller	CO2	PO2
i.	Mention the purpose NFV Management and Orchestration	CO2	PO1
j.	List out any 2 conversion examples in data types	CO3	PO1

PART – C: (Long Answer Questions) **(10 x 4 = 40 Marks)**

Answer ***ALL*** questions		Marks	[CO#]	[PO#]
3. a.	What is the difference between a physical and virtual entity?	5	CO3	PO2
b.	How Raspberry Pi is different from Desktop computers?	5	CO4	PO2
	(OR)			
c.	Differentiate between SDN and NFV?	5	CO2	PO3
d.	What is purpose of information model?	5	CO3	PO3
4. a.	Explain the IOT system Management with NETCONF-YANG	5	CO2	PO3
b.	What is a keyword argument in Python and explain the various conversion types in Python?	5	CO3	PO2
	(OR)			
c.	Briefly explain the communication with REST based API	5	CO1	PO3
d.	Explain with a simple program to control LED with Raspherry Pi	5	CO4	PO4
5. a.	How is function over riding implemented in Python? With example.	5	CO3	PO3
b.	Explain a simple python program for controlling an LED with a switch	5	CO4	PO4
	(OR)			
c.	What is the difference between procedure-oriented programming and object-oriented programming?	5	CO3	PO3
d.	What is an IoT Device? Explain the basic building blocks of IOT device	5	CO4	PO3
6. a.	What is the role of communication functional block in an IOT system?	5	CO1	PO3
b.	What are the differences between Machine in M2M and things in IOT?	5	CO2	PO2
	(OR)			
c.	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.	5	CO1	PO3
d.	Describe the role of YANG and Trans API modules in device management.	5	CO2	PO3

--- End of Paper ---