Registration No:

5th Semester Regular Examination: 2018-19
Internet of Things (IOT)
Branch: AEIE, AERO, AUTO, BIOMED, BIOTECH, CHEM, CIVIL, CSE, ECE, EEE, EIE, ELECTRICAL, ENV, ETC, FAT, IEE, IT, MANUFAC, MANUTECH, MECH, METTA, MINERAL, MINING, MME, PE, PLASTIC, TEXTILE
Time: 3 Hours
Max Marks: 100
Q Code E264
Answer Question No.1 (Part-1) which is compulsory, any eight from Part-II and any two from Part-III.
The figures in the right hand margin indicate marks.

Part- I

Q1	**Short Answer Type Questions (Answer All-10)**	**(02x10)**
a)	Zigbee specifications are based on _____ protocol.	
b)	Mention names of commercially available IoT devices	
c)	Explain how privacy can be a matter of concern in RFID devices	
d)	What is Low Energy Bluetooth?	
e)	Which standards allow interoperability of portlets across different platforms?	
f)	MQTT is a _____ oriented protocol.	
g)	Which communication protocols are used for M2M local area networks?	
h)	What is the role of a NETCONF server?	
i)	What is the function of configuration database in NETCONF-YANG?	
j)	What is Network Management Protocol?	

Part- II

Q2	**Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)**	**(06x08)**
a)	How IOT systems can be self-adapting and self-configuring?	
b)	Describe an example of IOT service that uses WebSocket-based communications.	
c)	What are the architectural constraints of REST?	
d)	What is the difference between sensors and actuators? Explain with an example.	
e)	Which communication protocols are used for M2M local area networks?	
f)	What are uses of SPI and I2C interfaces on Raspberry Pi?	
g)	Differentiate between conventional network architecture and SDN architecture with proper diagram.	
h)	What is IEEE 802.15.4 protocol? How it is related to IOT?	
i)	Why Python is preferred as a language for IoT devices?	
j)	What is the difference between web of things and internet of things?	
k)	How gateway devices and mobile node devices feature in the autonomy architecture of IOT system?	
l)	What is the difference between machines in M2M and things in IOT? Explain with example.	

Part-III
Long Answer Type Questions (Answer Any Two out of Four)

Q3   What is the function of communication functional block in an IOT system? What are the other components of a complete IOT system? Explain with diagram.   **(16)**

Q4   Give an account of platform middleware for Internet of Things. How clustering principles can be used in IOT?   **(16)**

Q5   Explain about protocol standardization for IOT. Also discuss other issues with IOT standardization.   **(16)**

Q6   Design and implement the functionality of a smart home lighting and air-conditioning IOT system. Implement the function in the controller to capture the movement of objects and temperature sensor and do the activities accordingly.   **(16)**