Code No: R163205B **R16** SET - 1

III B. Tech II Semester Regular Examinations, April/May - 2019

INTERNET OF THINGS

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	What is the role of things and internet in IoT?	[2M]
	b)	Define Physical Freemium.	[2M]
	c)	Which of the communication protocols are used by IoT?	[2M]
	d)	Define MQTT.	[3M]
	e)	What do you mean by data acquisition?	[2M]
	f)	Define cloud computing as per National Institute of Standards and Technology.	[3M]

PART -B

2.	a)	Explain the different characteristics of IoT.	[7M]
	b)	Enlighten different IoT Protocols.	[7M]
3.	a)	What are the digital and physical value-creation layers in an Internet of Things application? Explain	[7M]
	b)	Explain Modified OSI Stack for the IoT/M2M Systems.	[7M]
4.	a)	Explain Smart Firewall Device.	[7M]
	b)	How do IoT devices communicate? Explain with suitable diagrams.	[7M]
5.	a)	Explain about the advanced message queuing protocol.	[7M]
	b)	Explain the constrained application protocol (CoAP).	[7M]
6.	a)	Describe about Integration and Enterprise Systems.	[7M]
	b)	Discuss in detail about Streaming Analytics Spatial Analytics.	[7M]
7.	a)	Explain IOT cloud-based services using the Xively(Pachube/COSM).	[7M]
	b)	What is wireless sensor network? Discuss the benefits and limitations of wireless sensor networks.	[7M]

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Code No: R163205B **R16** SET - 2

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INTERNET OF THINGS

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

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2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	Define 802.11-WiFi.	[2M]
	b)	What is a Transmission Strategy?	[2M]
	c)	Define Smart Agriculture.	[2M]
	d)	What is IoT connectivity?	[3M]
	e)	Distinguish Product versus service business.	[3M]
	f)	Define Actuator.	[2M]

PART -B

2.	a)	What are some good resources to learn about Machine-to-Machine communication (M2M)?	[7M]
	b)	How does M2M communication work? Explain.	[7M]
3.	a)	Explain various Business Model Patterns in the Internet of Things.	[7M]
	b)	What are the different types of Sensors used in IoT Network?	[7M]
4.	a)	Explain about Industrial Internet of things (or IoT).	[7M]
	b)	Explain about Smart supply chain.	[7M]
5.	a)	Explain different application layer protocols for the IoT.	[7M]
	b)	Which protocol is used to link all the devices in the IoT? Explain in detail.	[7M]
6.	a)	Discuss the role of Data Analytics in Internet of Things (IoT).	[7M]
	b)	Explain about various components and business model patterns in the Internet of Things.	[7M]
7.	a)	What is Radio Frequency Identification system? How does it work? Explain.	[7M]
	b)	What is a Wireless Sensor Network? Mention the applications of it.	[7M]

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Code No: R163205B **R16** SET - 3

III B. Tech II Semester Regular Examinations, April/May - 2019

INTERNET OF THINGS

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

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2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	Why do IoT Systems have to be Self-adapting and self-configuring?	[2M]
	b)	What is a Digital Lock-in?	[2M]
	c)	Define RFID.	[2M]
	d)	Explain FTP Protocol.	[3M]
	e)	Explain Core competence analytics.	[3M]
	f)	What is a wireless sensor network?	[2M]

PART -B

2.	a)	What are the main challenges of an Internet of Things (IoT)?	[7M]
	b)	What kind of information do Internet of Things (IoT) objects communicate?	[7M]
3.	a)	Draw and Explain ETSI M2M Service Architecture.	[7M]
	b)	Define ETSI M2M domains and High-level capabilities.	[7M]
4.	a)	Explain Near Field Communication (NFC).	[7M]
	b)	Differentiate between BLE and NFC.	[7M]
5.	a)	Summarize Internet connectivity principles in IoT.	[7M]
	b)	Compare and contrast HTTP and HTTPS protocols.	[7M]
6.	a)	How does a data acquisition system work? Explain.	[7M]
	b)	Express how to organizing and analytics in IoT/M2M?	[7M]
7.	a)	Describe different Cloud Service Models.	[7M]
	b)	Explain about the advanced features of Nimbits that helps in developing IoT applications.	[7M]

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Code No: R163205B **R16** SET - 4

III B. Tech II Semester Regular Examinations, April/May - 2019

INTERNET OF THINGS

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

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2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	Define 802.16- WiMax.	[2M]
	b)	Explain Network Service Capability Layer (NSCL).	[2M]
	c)	What are connected devices?	[2M]
	d)	What are the components of IoT?	[3M]
	e)	What is the significance of analyzing the data generated by IoT application?	[3M]
	f)	Write about Nimbits.	[2M]

PART -B

2.	a)	How might wireless communications have an effect on the development and implementation of the internet of things (IoT)? Explain.	[7M]
	b)	What are the major Privacy and Security Issues in case of Internet Of Things (IoT)?	[7M]
3.	a)	Explain M2M Enabling Technologies.	[7M]
	b)	Explain M2M/IoT Standardization – Protocol Stack.	[7M]
4.	a)	Which of the devices are used to connect IoT devices to a home network?	[7M]
	b)	What are examples of IoT devices? Explain.	[7M]
5.	a)	Discuss in detail about File Transfer Protocol.	[7M]
	b)	Explain about TELNET.	[7M]
6.	a)	Describe about Business Model Patterns in the Internet of Things.	[7M]
	b)	Explain about Remote Usage and Condition Monitoring.	[7M]
7.	a)	Summarize Sensor Network Technology in IoT.	[7M]
	b)	Explain about Participatory Sensing.	[7M]

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