Code No: P18CBT02

HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)

III B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH/APRIL – 2023

IOT DEVICES

(CSE(IOTCSBT) BRANCH)

Time: 3 hours Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-A

Answer all the questions in Part-A (5X2=10M)

Q.No.		Questions	Marks	CO	KL
1.	a)	List any five mostly used sensors in IoT	[2M]	1	1
	b)	Name the different components in Raspberry pi board	[2M]	2	1
	c)	List the applications of ARM Cortex M3 processor	[2M]	3	1
	d)	Define unstructured Data in IoT	[2M]	4	1
	e)	List any three Health care Monitoring Devices	[2M]	5	1

PART-B

Answer One Question from each UNIT (5X10=50M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
2.	a)	Explain the generic M2M System Solution with a neat diagram	[5M]	1	2
	b)	Explain the various emerging IoT applications.	[5M]	1	2
		OR			
3.	a)	Explain how IoT technology can used in the following application areas: (i) health monitoring (ii) Agriculture (iii) Smart cities (iv) Weather monitoring	[5M]	1	2
	b)	Discuss the Challenges of Data management in IoT	[5M]	1	4
		UNIT-II			
4.	a)	Explain Arduino hardware with the help of a diagram.	[5M]	2	2
	b)	Compare Arduino Due and Raspberry Pi model B	[5M]	2	2
		OR			
5.	a)	Develop the code to blink LED using python and Raspberry pi.	[5M]	2	3
	b)	Mention the communication protocols used for M2M local area networks.	[5M]	2	1
		UNIT-III			
6.	a)	Briefly describe the features of the Cortex M3 based microcontrollers memory organization	[5M]	3	2
	b)	Explain the Thumb-2 Technology and Instruction Set Architecture.	[5M]	3	2
		OR			
7.	a)	Describe the operating modes of Cortex-M3 Processor.	[5M]	3	2
	b)	Define Interrupt Enable and Clear Enable registers of Cortex-M3 Processor	[5M]	3	1
		UNIT-IV			
8.	a)	Briefly explain the Data acquisition for IoT	[5M]	4	2
	b)	Define the following (i) Data Store (ii)Data Validation	[5M]	4	1
		OR			
9.	a)	Discuss any three IoT frameworks	[5M]	4	4

	b)	Find Key points about unstructured data storage on cloud	[5M]	4	1
UNIT-V					
10.	a)	Give a short note on the Security threats to IoT devices	[5M]	5	1
	b)	Define AWS and discuss how AWS is useful in IoT application Development	[5M]	5	1
OR					
11.	a)	Develop a code on Arduino/ Raspberry Pi to retrieve temperature and humidity data from thingspeak cloud	[5M]	5	3
	b)	Develop a code on Arduino/ Raspberry Pi to publish temperature data to MQTT broker.	[5M]	5	3

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