MITE OF

CBCS SCHEME

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=	*Security		Eighth Semester B.E. Degree Examination, July/August 202	2
Internet of Things Technology				
1 .	1			
11	Tin	ner 3	3 hrs. Max. M	arks: 80
		N	ote: Answer any FIVE full questions, choosing ONE full question from each mo	dule.
tice				
prac			Module-1	
mal	1	a.	Explain in detail the Genesis of IoT.	(08 Marks)
as		b.	Explain the different challenges of IoT.	(06 Marks)
atec		c.	Define IT and OT.	(02 Marks)
e tre			O.D.	
ill b	2		OR	(00 Mordra)
, w	2	a.	Explain the expanded view of the simplified IoT architecture with a neat diagram. Explain IoT architectural drivers.	(08 Marks)
= 5(b.	Explain for arcinectural directs.	(UO IVIAIRS)
+8			Module-2	
42	3	a.	Define Sensors and Actuators.	(02 Marks)
in eg		b.	Explain various types of sensors with description and examples.	(06 Marks)
ritte		c.	Define WSNs. List the limitations of smart objects in WSNs and mention the	
N St			communication protocols for WSNs.	(08 Marks)
ation				
mba			OR	
/or	4	a.	Explain IEEE 802.15.4 (i) Physical layer and (ii) MAC layer, with diagrams.	(08 Marks)
2. Any revealing of identification, appeal to evaluator and l or equations written eg, $42+8=50$, will be treated as malpractice.		b.	Explain LoRaWAN architecture and its MAC frame format.	(08 Marks)
tor				
alus	_		Module-3	(0(3/1-1-)
o ev	5	a.	Explain the key advantages of Internet Protocol.	(06 Marks)
sal t		b.	Explain 6LOWPAN header stacks, protocol header compression and fragmentation	(10 Marks)
appe			· O' a'	(10 1/141145)
on,			OR	
cati	6	a.	Design an IoT application involving IoT Data Broker for providing interoperability	ty.
ntifi				(08 Marks)
ide		b.	Develop an IoT application framework which uses the temperature and pressure	
g of			publish/subscribe module using MQTT.	(08 Marks)
alin				
reve			Module-4	
nyı	7	a.	Define:	(02 Marks)
2. A			(i) Structured versus unstructured data	(02 Marks)
			(ii) Data in motion versus data at rest(iii) IoT data analytics overview.	(02 Marks)
		h	(iii) IoT data analytics overview. Explain the Hadoop distributed file system with a neat diagram.	(08 Marks)
		b.	Explain the Hadoop distributed the system with a near diagram.	()
			OR CMRIT LIBRARY	
	8	a.	Explain the Purdue Model for control hierarchy. BANGALORE - 560 037	(08 Marks)
	U	b.	Explain the risk assessment framework for OCTAVE.	(08 Marks)

Module-5

9 a. Explain the details of Arduino programming. List the advantages and its applications.

(10 Marks)

b. Write a python program on Raspberry Pi to blink an LED.

(06 Marks)

OR

10 a. Explain the smart city layered architecture with a neat diagram.

(08 Marks)

b. Explain connected street lightning solution with architecture.

(08 Marks)