PRN:		Course Code:	MCA 2051

Second Year **M.C.A.** End SemesterExamination Winter2022

Internet of Things

Day and Date: Wed. 21.12.22 Max Marks: **100**

Time: 10.30am - 1.30pm. Duration: **03**hrs

Instructions: All Questions are compulsory

		Marks	Bloom's Level	CO
Q.1	**Attempt the following**			
a)	Identify the different characteristics of Internet of things and explain each of them.	08	L3	CO1
b)	Compare Rest API with WebSocket API.	08	L4	CO1
	OR			
b)	Explain the following Communication Models in detail. 1. Push–Pull communication model 2. Exclusive Pair Communication Model	08	L2	CO1
Q.2	**Attempt the following**			
a)	Illustrate the architecture of Machine 2 Machine with neat diagram.	08	L2	CO1
b)	Explain Simplified IoT Architecture in detail	08	L5	CO1
	OR			
b)	Distinguish Cloud Computing with Edge Computing	08	L4	CO1
Q.3	**Attempt any two from the following**			
a)	Determine the role of RFID protocol in IoT.	08	L5	CO2
b)	Show diagrammatically and explain the MQTT protocol	08	L2	CO2
c)	Demonstrate the SCADA system in detail with neat diagram	08	L2	CO2
Q.4	**Attempt any two from the following**			
a)	Discuss in detail about Arduino with neat sketch	08	L6	CO3
b)	Compare Raspberry pi with Arduino	08	L5	CO3
c)	Examine and discuss the use of different pins on Raspberry Pi.	08	L4	CO3
Q.5	**Attempt any Two of the following**			
a)	Compare between structured and unstructured data	09	L6	CO3
b)	Discuss unstructured Database with its characteristics.	09	L6	CO3
c)	List and explain different types of data analytics in detail	09	L4	CO3
Q.6	**Attempt any Two of the following**			
a)	Explain needs of IoT for Oil and Gas Industry	09	L2	CO4
b)	Identify the challenges faced by industry related IoT Applications	09	L3	CO4
c)	Construct a neat sketch of eHealth system IoT Applications and explain in detail	09	L3	CO4

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