Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

Manipal School of Information Sciences (MSIS), Manipal
First Semester Master of Engineering - ME (Embedded Systems) Degree Examination - January 2023

Internet of Things (Elective-1) [ESD 5132]

Marks: 100   **Duration: 180 mins.**

Wednesday, January 11, 2023

Answer all the questions.

1)	Describe the Machine-to-Machine (M2M) architecture. List the differences between IoT and M2M. (TLO 1.1)	(10)
2)	With a block diagram, explain Representational State Transfer (REST)-based communication API. (TLO 1.1)	(10)
3)	Discuss with an example of IoT services that uses a publish-subscribe communication model. (TLO 1.1)	(10)
4)	Illustrate the 6LoWPAN Architecture. (TLO 2.4)	(10)
5)	Explain the file handling concept in Python with examples. (TLO 1.2)	(10)
6)	Explain Server Socket Method and Client Socket Methods in Python. Why do we need a Socket? (TLO 3.1)	(10)
7)	Explain Bluetooth general packet format. (TLO 2.1)	(10)
8)	Describe the General frame structure of ZigBee. Explain different device types and roles of ZigBee devices (TLO 2.2)	(10)
9)	Explain the main design objectives considered in the design of sensor networks. Discuss CSMA Protocol. (TLO 1.3)	(10)
10)	Illustrate how to create a database and access, update and delete data from the database. (TLO 3.2)	(10)

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