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Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S8 (R,S) / S8 (PT) (R) Examination May 2024 (2019 Scheme)

Course Code: ECT458
Course Name: INTERNET OF THINGS

Max. Marks: 100   **Duration: 3 Hours**

PART A
Answer all questions, each carries 3 marks.   Marks

1	Explain the different characteristics of IOT?	(3)
2	List the IOT enabling technologies.	(3)
3	Differentiate M2M and IOT.	(3)
4	Explain the wireless sensor network with block diagram?	(3)
5	What is Modbus? Give details.	(3)
6	Explain detail about NB-IOT Network Layer?	(3)
7	Name any two cloud based platforms and give explanations.	(3)
8	Illustrate the data collections , storage and computing used in cloud platform.	(3)
9	Explain about IoT vulnerabilities?	(3)
10	Define message integrity? How it is checked?	(3)

PART B
Answer any one full question from each module, each carries 14 marks.

Module I

11 a) Explain physical design of IOT?   (7)

    b) Explain the Levels of IoT with figure?.   (7)

OR

12 a) Describe the IoT functional block .   (7)

    b) Explain about IoT Communication models?   (7)

Module II

13 a) Explain about sensors and actuators?   (7)

    b) Explain in detail about WSN protocol?   (7)

OR

14 a) Explain with figure network function virtualization use case for IoT?   (7)

    b) Explain the issues of conventional networking architectures? How is it solved in SDN?   (7)

Module III

15 a) Explain IEEE802.15.4 physical layer, MAC Layer and security implementation with the help of Frame format? (7)

b) Explain LoraWAN architecture and give detailed description on Physical Layer and MAC layer of LoraWAN architecture? (7)

OR

16 a) Explain in detail about NB-IoT Network Layer? (7)

b) Give the overview of 6 LoW PAN adaptation layer. (7)

Module IV

17 a) Explain about various cloud deployment models? (8)

b) List any two cloud based platforms and give explanation. (6)

OR

18 a) Explain an IoT device. Draw basic building blocks of an IoT device? (7)

b) Explain the features of Rasperry Pi ? (7)

Module V

19 a) Explain the IoT strategy for smarter cities? (8)

b) List the top 10 vulnerabilities for attack. (6)

OR

20 a) Demonstrate a street light architecture in smart cities with the help of a diagram. (6)

b) Explain with diagram 4 layer smart city architecture? (8)

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