Reg. No. :

Question Paper Code: 99426

B.E./B.Tech. DEGREE EXAMINATION, NOV 2023

Elective

Electronics and communication Engineering

19UEC926- Sensors for Iot

(Regulations 2019)

Duration: Three hours   Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1. Differentiate between analog and digital sensors.   CO1- U

2. Differentiate between hydraulic and pneumatic actuators with examples.   CO1- U

3. Differentiate between LoRa and NB-IoT.   CO3- U

4. Depending on the urgency of data processing, how are IoT data classified? CO3- U

5. Provide a few examples of Capacitive and Magnetic Sensing.   CO4- U

6. Explain the use of basic sensing principles in RFID technology.   CO4- U

7. Categorize two types of environmental sensors   CO5- U

8. Explain On-road Sensors   CO5- U

9. Explain the purpose of Rocker Switch   CO2- U

10. Mention the properties of ceiling fan in packet tracer   CO2- U

PART – B (5 x 16= 80 Marks)

11. (a) Explain the various types of actuators that can be used in IoT.   CO1-U   (16)

Or

    (b) Explain the characteristics of Actuators and Sensors that can be   CO1-U   (16)
        implemented in IoT for diverse Applications

12. (a) Select and Identify the various processing topologies used in IoT   CO3-App (16)
        and SIoT by applying the the various considerations in sensor
        networks

Or

(b) Explain the processing method that can be used in development of densely deployable sending tasks   CO3-App   (16)

13. (a) Analyze the role of management planes that are part of the WSN Protocol stack   CO1-U   (16)

Or

(b) Analyze the role of RFID technology in WSNs   CO1-U   (16)

14. (a) Create and evaluate a useful wearable sensor system   CO5-E   (16)

Or

(b) Design a research roadmap to implement the wearable in daily life.   CO5-E   (16)

15. (a) Design a scenario in tracer environment to control fan speed through laptop or mobile devices and sensed temperature should be displayed in mobile phone or laptop   CO6- C   (16)

Or

(b) Create a smart room to connect smart things and sensors that directly connected with MCUs(With Gateways)   CO6- C   (16)

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