Reg. No.												

Question Paper Code	11627

M.E. - DEGREE EXAMINATIONS, NOV/DEC 2022
Third Semester
M.E. - Embedded System Technologies
20PESEL318 - EMBEDDED NETWORKING AND AUTOMATION OF ELECTRICAL SYSTEM
(Regulations 2020)

Duration: 3 Hours
Max. Marks: 100

PART - A (10 × 2 = 20 Marks)
Answer ALL Questions

		Marks, K-Level, CO
1.	What are the basic elements of a network?	2,K1,CO1
2.	How speed identification is done on USB?	2,K2,CO1
3.	Draw the hardware architecture of WSN.	2,K2,CO2
4.	List the different topologies used in WSN.	2,K1,CO2
5.	Give any four application areas of WSN.	2,K1,CO3
6.	State the need for time synchronization in WSN	2,K1,CO3
7.	How are servo motors different from stepper motors?	2,K2,CO5
8.	What are the different types of relays?	2,K1,CO5
9.	List the three discrete phases of outage management.	2,K1,CO6
10.	In what ways is GIS centric different from SCADA centric?	2,K2,CO6

PART - B (5 × 13 = 65 Marks)
Answer ALL Questions

11. a) Explain in detail about the MOD bus.   *13,K2,CO1*

OR

    b) Describe in detail about RS 232C serial communication protocol.   *13,K2,CO1*

12. a) Discuss in detail about different types of network topology and the design challenges of WSN.   *13,K2,CO2*

OR

    b) Explain about time synchronization in Distributed WSN.   *13,K2,CO2*

13. a) Discuss in detail about the application of sensor networks in Home control.   *13,K2,CO3*

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create   **11627**

b) Discuss the basic principle for data transfer and energy management for SMAC.   *13,K2,CO3*

14. a) Explain the principle of the stepper motor and state the different types available.   *13,K2,CO5*

OR

b) Discuss in detail about various sensor types and their characteristics.   *13,K2,CO5*

15. a) Explain in detail about SCADA Data Models.   *13,K2,CO6*

OR

b) Explain in detail about the extended control feeder automation.   *13,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Discuss the Case study on Temperature control.   *15,K3,CO4*

OR

b) Describe the conventions that are adopted in drawing a ladder diagram.   *15,K3,CO4*