

Total No. of Questions – [6]

Total No. of Printed Pages: 1

G.R. No.	
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DECEMBER 2021 - ENDSEM EXAM
FINAL YEAR B.TECH. (COMPUTER ENGINEERING) (SEMESTER - I)
COURSE NAME: PROGRAM ELECTIVE-V
WIRELESS SENSOR NETWORK
COURSE CODE: CSUA40182A
(PATTERN 2018)

Time: [1 Hr]

[Max. Marks: 30]

Instructions to candidates:

- 1) Answer Q.1 OR Q.2, Q.3 OR Q.4, Q.5 OR Q.6.
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1 a	Organize the different routing protocols in WSN according to the network structure and a protocol operation	4
Q.1 b	Discuss the various routing challenges and design issues in WSN	6
OR		
Q2 a	Distinguish between hierarchical routing protocols and location based routing protocols	4
Q2 b	Demonstrate the operational steps of LEACH protocol with suitable diagrams	6
Q.3 a	Explain the common methods for position computation techniques	4
Q.3 b	Design a flowchart outlining the three main phases of localization algorithms in WSN	6
OR		
Q.4 a	Conclude the advantages of localization and positioning in of sensor nodes in the context of suitable WSN application.	4
Q.4 b	Analyze the various approaches exist to determine a node's position	6
Q.5 a	Describe the various challenges for Operating Systems in WSN.	4
Q.5 b	Compare: Tiny OS, Nano RK, Mate OS, Mantis OS.	6
OR		
Q.6 a	Elaborate the various problems associated with large scale deeply embedded system	4
Q.6 b	Sketch the architecture of Nano-RK OS and describe the importance of its various components	6