Day : Thursday

Time : 02:30 PM-05:30 PM

Date : 15-12-2022

W-13371-2022

Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagram **WHEREVER** necessary.
4) Assume suitable data if necessary.

Q.1 What are the advantages we face in designing sensor network systems?   **[10]**

OR

Q.1 How denser sensor fields improves the odd of detecting a signal source?   **[10]**

Q.2 Why we need at least three independent distance measurement to uniquely determine the location of a signal on a two dimensional plane?   **[10]**

OR

Q.2 What is Bayesian state estimation? Write down the equation.   **[10]**

Q.3 Differentiate between greedy distance routing and compass routing with necessary diagrams.   **[10]**

OR

Q.3 With necessary diagram and equations define minimum energy broadcast problem.   **[10]**

Q.4 How clock phase differences is estimated? With necessary diagram explain it.   **[10]**

OR

Q.4 How time stamps are calculated using the reference frame of one node?   **[10]**

Q.5 What are the parameters considered for task-driven sensing?   **[10]**

OR

Q.5 What is sensor tasking? Draw diagrams and explain sensor tasking with respect to chemical toxicity monitoring.   **[10]**

Q.6 What is Orthogonal Range Searching (ORS)? Write an SQL query to explain ORS.   **[10]**

OR

Q.6 How Gaussian ADT models the uncertainty in a database system.   **[10]**

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