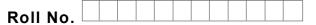


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M.Tech.(ECE) (2018 Batch) (Sem.-1) WIRELESS SENSOR NETWORKS Subject Code : MTEC-PE1X-18-1 Paper ID : [75174]

Time: 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES : 1.Attempt any FIVE questions out of EIGHT questions. 2.Each question carries TWELVE marks.

- Q1 What is sensor network? Draw the block diagram of sensor network architecture and briefly explain each block.
- Q2 What is wireless sensor mote? Compare following sensor mote on the basis of their application, technical specification, size, battery life, mechanical robustness : *Mica2 Motes, TelosB Motes and cricket motes*.
- Q3. Explain sensor deployment mechanism and discuss following issues: Coverage issues, sensor grid and sensor web.
- Q4. What do you understand by localization and positioning of sensor nodes? What are the major properties of localization and positioning procedures?
- Q5. Explain Trilateration method to determine a node's position. Compare this method with Scene analysis and Proximity method.
- Q6. Explain the Geographical Energy Aware Routing (GEAR) protocol in detail. What is twotier data dissemination process?
- Q7. Explain how low duty cycle protocols of sensor networks operate. Also describe the address and name management system of WSN.
- Q8. Briefly explain about the sensor network programming challenges. Compare C and nesC programming tools for WSN simulation.