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Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Sensors and Networks

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions, selecting
at least TWO full questions from each part.**

PART – A

- 1 a. What is a sensor network? Explain the unique characteristics and constraints of sensor network. (10 Marks)
- b. Mention the challenges and limitations of wireless sensor networks. (10 Marks)
- 2 a. What are sensors? Explain different types of sensors that are employed in WSNs. (10 Marks)
- b. With neat schematic representation, explain a smart sensor. (10 Marks)
- 3 a. List the application of wireless sensor network. (10 Marks)
- b. Explain three basic computer architecture used to design processor subsystem. (10 Marks)
- 4 a. With neat diagram, explain sensing subsystem used in wireless sensor node. (10 Marks)
- b. Describe different network topologies. (10 Marks)

PART – B

- 5 a. Explain the OSI model. (10 Marks)
- b. Mention some of the networking protocols supported by wireless network. (10 Marks)
- 6 a. Describe the simple broadcasting mechanism used for WSNs. (10 Marks)
- b. With neat sketch, illustrate the TTDD protocol for multicasting data from a source to mobile sink. (10 Marks)
- 7 a. What are the protocols proposed for congestion control in WSNs? (10 Marks)
- b. List the disadvantages of TCP and UDP when used in WSNs. (10 Marks)
- 8 a. Explain with a neat figure, the data transfer in Beacon-Enabled networks. (10 Marks)
- b. Explain ZigBee functional layer architecture and protocol stack. (10 Marks)

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