

Code: 17D08201

M.Tech II Semester Supplementary Examinations January/February 2019

**WIRELESS SENSOR NETWORKS**

(Computer Networks)

(For students admitted in 2017 only)

Time: 3 hours

Max. Marks: 60

Answer all the questions

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- 1 (a) What are the important issues to wireless sensor networks?  
(b) List and explain the two categories of sensor networks.

**OR**

- 2 Draw and explain the components of a typical sensing node.

- 3 Draw and explain the five basic software subsystems of wireless networks.

**OR**

- 4 (a) List and explain the three basic physical mechanisms affect the radio transmission.  
(b) Explain in detail about the 3G cellular network.

- 5 Describe the performance requirements of the MAC protocols.

**OR**

- 6 (a) Explain about the Hidden and Exposed node problem in wireless environment.  
(b) List and explain the routing challenges in wireless sensor networks.

- 7 Describe the general middleware architecture for wireless sensor networks with a neat diagram.

**OR**

- 8 (a) What are the design issues of transport protocols in wireless sensor networks?  
(b) Explain in detail about the AMF (Adaptive Middleware Framework).

- 9 (a) Explain the management architecture MANNA for WSNs.  
(b) Discuss briefly about the design issues of operating system.

**OR**

- 10 (a) Describe the naming issues related to network management.  
(b) Write a short note on MagnetOS operating system.

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