

Code No: 128AA

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B. Tech IV Year II Semester Examinations, May - 2019****ADHOC AND SENSOR NETWORKS****(Common to CSE, IT)****Time: 3 hours****Max. Marks: 75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A**(25 Marks)**

- 1.a) What is Multipoint Relay? [2]
- b) What are the features of Cluster Head Gateway Switch routing protocol? [3]
- c) Explain how to classify the Multicast routing protocol. [2]
- d) What are the drawbacks of flooding? [3]
- e) What is the motivation behind the design of protocols for WSN? [2]
- f) What are the applications of WSNs? [3]
- g) Explain about the integrity in adhoc networks? [2]
- h) What are the assumptions of secure routing protocols in WSNs? [3]
- i) Discuss about ns 2 simulator. [2]
- j) What is TOSSIM? [3]

PART - B**(50 Marks)**

- 2.a) Explain how to create the mesh in ODMRP.
- b) Distinguish between topology based and Position based approaches in adhoc networks. [5+5]

OR

- 3.a) What are the characteristics of MANETs?
- b) List out the major forwarding strategies in Position Based routing. Explain the Greedy Packet Forwarding strategy. [5+5]

- 4.a) Explain why traditional TCP cannot be used in wireless adhoc networks.
- b) Describe the Voronoi Diagram based Geocasting (VDG) protocol. [5+5]

OR

- 5.a) Explain the header format of TCP.
- b) Explain the classification of broadcasting protocols in MANETs. Explain the Area based method. [5+5]

- 6.a) Explain the functional block diagram of sensor node.
- b) Describe about the hierarchical Power Aware routing in WSNs. [5+5]

OR

- 7.a) What are the advantages of WSN over wired ones?
- b) Explain how to find the Multiple Paths in WSNs. [5+5]

- 8.a) Explain about the architecture of intrusion detection system for adhoc networks.
b) Explain the problems that affect secure adhoc routing. [5+5]

OR

- 9.a) Explain about the Octopus protocol.
b) Explain about the key management in sensor networks. [5+5]

- 10.a) Explain about the characteristics of nesC.
b) What is importance of TinyGALS? [5+5]

OR

11. Explain the architecture of TinyOS. [10]

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