R15

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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