



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech VIII Semester Regular Examinations, June 2022

Subject code: 2E8EC

ADHOC WIRELESS NETWORKS
(COMPUTER SCIENCE & ENGINEERING)

Maximum Marks: 70

Date: 17.06.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Outline the challenging issues in ad hoc network maintenance.
- 2 Wireless sensor network and wireless mesh network are part of the ad hoc wireless network- Justify that statement.
- 3 What are the performance requirements for a MAC protocol?
- 4 Write short notes on HRMA.
- 5 Categorize the routing protocols of ad hoc wireless networks
- 6 What are the advantages and disadvantages of DSDV routing protocols in an ad hoc wireless network
- 7 What are the challenges and issues in transport layer protocol?
- 8 Write notes on split TCP
- 9 Write the importance of data integrity in network security.
- 10 Name the methods to minimize the attacks in Ad-Hoc Wireless Networks.

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 A. Differentiate between cellular network and an ad hoc network. [5]
B. Write the major advantages of an ad hoc wireless Internet. [5]
OR
- 12 A. Assess the importance of multicasting in an ad hoc wireless network application. [5]
B. Summarize the security threats in an ad hoc wireless networks. [5]
- 13 Explain any three schedule-based MAC protocols of Ad-Hoc Wireless Networks. [10]
OR
- 14 Explain how the scheduled based MAC protocol differs from the contention-based MAC protocol. [10]
- 15 How is the loop free property ensured in an On-Demand routing protocol and in table driven routing protocol? [10]
OR
- 16 Explain how route is established and maintained in an ad hoc network using AODV routing protocol. [10]
- 17 Elaborate the challenges and issues in Transport layer protocol and find the suitable solutions for it. [10]
OR
- 18 A. Explain in detail about feedback-based TCP [5]
B. Explain TCP-BUS and Ad-hoc TCP [5]
- 19 Explain about : i) Symmetric and Asymmetric key Algorithms [5] ii) Key Management Approaches. [5]
OR
- 20 Explain in detail about Security-Aware AODV protocol. [10]