



R18 Regulation

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**

Subject code: 2E8DA

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

**B.Tech VIII Semester Regular Examinations, June 2022**

**ADHOC WIRELESS SENSOR NETWORKS**

(Electronics and Communication 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

(10x2M=20 Marks)

All the following questions carry equal marks

- 1 Write the issues in Ad Hoc networks.
- 2 List the applications of Ad Hoc networks
- 3 What is multicasting?
- 4 List the functions performed by TCP.
- 5 List the disadvantages of clustering.
- 6 What are the categories of WSN?
- 7 List out the requirements of network security.
- 8 Define Key distribution and Key integrity.
- 9 Name the two types of components in nesC.
- 10 List the components of node-level simulator.

Part-B

(5X10M=50Marks)

Answer All the following questions.

- 11 A. Explain briefly the architecture of MANET with a neat Diagram. (5)  
B. Distinguish Cellular networks from the mobile Ad Hoc network. (5)  
OR
- 12 Explain the DSDV routing protocol for Ad Hoc Wireless Networks with an example. (10)
- 13 What is TCP? Discuss with an example TCP over Ad hoc Wireless Networks. (10)  
OR
- 14 Explain various protocols used in Multicast routing in detail. (10)
- 15 Explain about the S-MAC protocol in WSN. (10)  
OR
- 16 Summarize about the characteristics of embedded sensor nodes family with the help of MICA mote architecture. (10)
- 17 A. Identify the Key management schemes in Wireless Sensor Networks. (4)  
B. Illustrate the key distribution and management mechanism required for secure communication in sensor networks. (6)  
OR
- 18 Define sensor node hardware and explain in detail about three categories of sensor node hardware with examples. (10)
- 19 Explain the TinyOS operating system with an example. (10)  
OR
- 20 Illustrate the component interfaces and module implementations of TinyGALS programming. model with necessary diagrams. (10)