*R18 Regulation* *Subject code:2E8DA*

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

**B.Tech VIII Semester Supplementary Examinations, APRIL 2024**

## Adhoc Wireless Sensors Networks

**(Electronics and Communication Engineering)**

***Maximum Marks: 70*** Date:22.04.2024 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 What is topology-based routing?
2 What are the applications of MANETS?
3 What are the problems arising during broadcasting?
4 What is Geo casting?
5 Why traditional routing protocols are not well suited for wireless sensor networks?
6 What are the advantages of WSN over wired ones?
7 What is key management?
8 List the challenges of sensor network programming.
9 Explain the features of Tiny GALS?
10 Why TOSSIM is not appropriate for heterogeneous applications?

Part-B

Answer All the following questions. (5X10M=50Marks)

11 Define MANET? Explain briefly characteristics of MANETs. (10M)

OR

12 Explain how route is established and maintained in an Ad Hoc network using AODV routing protocol. (10M)

13 A. Explain the methodology used in MCEDAR, a hybrid multicast protocol. (5M)
B. Explain the steps involved in GeoTORA for geocasting. (5M)

OR

14 Explain about the multi cast zone routing protocol. (10M)

15 Present an elaborate note on the energy consumption rate for sensors in a wireless sensor network. (10M)

OR

16 Explain the design issues in MAC layer of sensor network(10M)

17 Explain the Problems that Affecting Secure Ad Hoc Routing. (10M)

OR

18 Explain about the security routing and intrusion detection systems. (10M)

19 Explain the architecture of TOSSIM. (10M)

OR

20 Discuss about the sensor network programming challenges. (10M)