

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E –IIst SEMESTER–EXAMINATION – JULY- 2012****Subject code: 1722702****Date: 16/07/2012****Subject Name: Ad Hoc Networks****Time: 10:30 am – 13:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define Ad hoc Network and discuss the architecture of PRNET. **07**
(b) Differentiate infrastructure-based and infrastructure-less networks. **07**

- Q.2** (a) Draw schematic of typical ESS and explain the services offered by typical IEEE 802.11 network. **07**
(b) List the issues related with ad hoc wireless networks and explain any two in detail. **07**

OR

- (b) Describe a common method used in alleviating the hidden terminal problem at the MAC layer. **07**

- Q.3** (a) List table driven routing protocols and explain any one with its advantages and disadvantages. **07**
(b) Compare tree-based multicast routing protocols with mesh based multicast routing protocols. **07**

OR

- Q.3** (a) List on demand routing protocols and explain any one with its advantages and disadvantages. **07**
(b) Explain WARM (Wireless Ad hoc Real-Time Multicasting Protocol) with its TDMA frame structure. **07**

- Q.4** (a) Why does TCP not performing well in ad hoc wireless networks? **07**
(b) Explain QoS enabled Ad hoc On demand Distance Vector (AODV) Protocol. **07**

OR

- Q.4** (a) Compare various TCP solutions for ad hoc wireless networks. **07**
Q.4 (b) Explain SWAN (Stateless Wireless Ad hoc Network) Model. **07**

- Q.5** (a) Explain battery scheduling techniques to improve battery lifetime. **07**
(b) Discuss the issues and challenges in designing the sensor network. **07**

OR

- Q.5** (a) Explain Power Aware Multi Access Signaling (PAMAS) protocol. **07**
(b) Explain clustered sensor network architecture. **07**
