

(3 hours)**[80 marks]**

NOTE: Question No 1 is compulsory
Attempt any three questions from remaining.
Assume suitable data if necessary.

- Q1.** A) Explain in detail hidden and exposed terminal problem in Wireless Network. [10]
B) Explain in Issues in Designing a Routing Protocol for Ad Hoc Wireless Networks and also explain in detail AODV routing protocol. [10]
- Q2.** A) Explain in detail Contention based MAC protocols- with reservation Mechanism. [10]
B) Explain design goal of a transport layer protocol for ad hoc wireless network. [10]
- Q3.** A) Give comparison between IEEE 802.11a, 802.11b, 802.11g. [10]
B) What are the various attacks on MANET? Explain attacks on MANET. [10]
- Q4.** A) Explain the security issues in ad hoc wireless networks [10]
B) Explain in detail Dynamic Source Routing protocol with example? [10]
- Q5.** A) Describe data link layer solutions to calculate the optimum transmission range. [10]
B) Explain the tree based and mesh based multicast routing protocols. [10]
- Q6.** Write a short note on following. [20]
- A. TORA
 - B. MANET vs VANET
 - C. Characteristics of the Wireless channel.
 - D. 802.11p