Q. P. Code: 16296

[Marks: 80]

[Time: - 3 Hours]

N.B.: (1) Question No. 1 is compulsory.
(2) Attempt **any three** of remaining five questions.
(3) Assume suitable data if necessary and clearly state it.

1. (a) What is hidden terminal problem? 5
   (b) Give the difference between cellular networks and ad hoc wireless networks. 5
   (c) List the types of attacks in ad hoc wireless networks. 5
   (d) Differentiate proactive and reactive protocols. 5

2. (a) Discuss the main issues in designing a MAC protocol for ad hoc wireless networks. 10
   (b) Explain advantages and disadvantages of DSDV routing protocols. 10

3. (a) Explain operation of directional MAC (DMAC) protocol. 10
   (b) Explain major reasons behind throughput degradation that TCP faces when used in ad 10
   hoc networks?

4. (a) What do you mean by quality of service (QoS) Provisioning? Explain with example 10
   QoS routing in ad hoc wireless network.
   (b) Explain the temporally ordered routing algorithm (TORA). Also mention its 10
   advantages and disadvantages.

5. (a) What is hybrid routing protocol? Explain with example. 10
   (b) Why secure routing protocols are needed? Explain security aware ad hoc routing 10
   protocol (SAR).

6. Write short notes on: 10
   (a) 802.11g IEEE standard. 10
   (b) On demand multicast routing protocol (ODMRP).