MCA/ M11
Computer Networks and Data Communication
Paper : MCA 202

Time: Three Hours **Maximum Marks: 80**

Note: Question No. 1 is compulsory. In addition to this attempt four questions by selecting one question from each Unit.

1. (a) What is frame relay? Discuss its significance.
   (b) What is Load Shedding? Explain
   (b) Differentiate between ADSL and Cable.
   (c) What do you understand by limited contention Protocols? Discuss their role.
   (d) What is distance vector routing? Explain
   (e) What do you understand by transmission impairments? How are these significant?
   (f) What is Nyquist theorem? State its significance.
   (g) What is FDDI? Discuss its role.

Unit-I

2. (a) What is OSI reference model? Explain the model by detailing out all important features.
   (b) What is network software? How are network protocols and architecture related ? How are network protocols relevant in context of network software? illustrate.
3. Differentiate between the following:-
   (a) Connection-less and connection-oriented protocols.
   (b) Point-to-point and Broadcast networks.

Unit-II

4. (a) What do you mean by wireless transmission? What makes this transmission? more challenging? Illustrate
   (b) what is encoding ? illustrate different types of Manchester encoding techniques.
5. Differentiate between the following :-
   (a) Circuit switching and packet switching.
   (b) FDM and TDM.

UNIT-III

6. (a) What are the main responsibilities of data link layer ? How does this layer address error and flow control related issues? Explain
   (c) Data link protocol almost always put the CRC in a trailer rather than in a header. Why?

7. Explain the following:-
   (a) DQDB
   (b) Sliding window protocols.

UNIT-IV

8. (a) What are Adhoc networks? How routing takes place in Adhoc networks? Illustrate.
   (b) What is routing? What are routing algorithms? How is optimality principle relevant in this context? Illustrate.
9. Explain the followings:-
   (a) Link State routing.
   (b) Traffic shaping