MEDC-105
M.E./M.Tech. I Semester

Examination, December 2014
Data Communication and Computer Network

Time : Three Hours

Maximum Marks : 70

Note : i) Attempt any five questions out of eight questions.
ii) All questions carry equal marks.
iii) Assume suitable data, if required.

1. a) Explain the transmission mechanism. Give brief reviews of synchronous and asynchronous data transmission system.
b) Give an introductory note on switching theory . Write down its classification and explain each one of them in brief with example .

2. a) Discuss about the various error detection techniques. Give its classification in brief . Discuss about the error detecting capabilities of longitudinal redundancy check.
b) Explain CRC code with the help of suitable example. Discuss about its physical significances.

3. a) Discuss about the RS 232 C. Write down its practical applications, along with their advantages and disadvantages.
b) Give a brief introduction on X.21 standards. Write down its classification and explain any one of them with example.

4. a) Explain the sliding window protocol with the help of suitable example.
b) Discuss about the ARQ techniques for error control and their comparison . Discuss about their performance analysis .

5. a) Explain data link control unit . Discuss about the point to point and multi point links.
b) Discuss the performance analysis of HDLC bit oriented link control protocol.

6. a) What are the significances of different algorithms used in communication network? Explain the Dijkstra's algorithm showing network properties with communication systems.
b) Discuss about the deadlock condition in communication network and its avoidance procedure.

7. a) Give a brief classification of various topologies which can be use in the local area network. Explain each one of them.
b) Write and explain various IEEE standards for LAN. Discuss that IEEE standard which explains the MAC schemes.

8. Write short notes on any four of the following :
a) TCP/IP Protocol
b) ATM and Frame relay
c) Introduction to WAN
d) Bellman ford least cost algorithm.
e) Token passing
f) Null model