Exam.Code:0917
Sub. Code: 6786

1128
B.E. (Computer Science and Engineering)
Fifth Semester
CS-501: Data Communication Networks

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt *five* questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

   a) Distinguish between data rate and signal rate.

   b) What is the need of multiplexing?

   c) List the disadvantages of star topology.

   d) What is cell switching?

   e) What is hamming distance?

(5x2)

UNIT – I

II. a) Enumerate the advantages and optical fiber over pair and coaxial cable.

   b) Differentiate between FHSS and DSSS spectrum techniques. (2x5)

III. a. What is the ratio of useful data to the entire packet for the smallest Ethernet frame?

   b) Explain the meaning of various fields of FDDI frame format. (2x5)

IV. a. Explain the Frame Relay protocol architecture in brief.

   b. Differentiate between synchronous and statistical TDM. (2x5)

UNIT – II

V. a) Given the dataword 101001111 and the divisor 10111, show the generation of the CRC codeword at the sender site.

   b) Explain the working principle of CDMA. (2x5)

VI. a) Compare the important features of narrowband ISDN and broadband ISDN.

   b) What are the services provided by the data link layer? Explain in brief. (2x5)

VII. a) Differentiate between ALOHA and slotted ALOHA with example.

   b) Write short note on ATM architecture. (2x5)

x-x-x