Exam. Code: 0917
Sub. Code: 6786

1127

B. Engg. (Computer Science and Engineering)
5th Semester
CS-501: Data Communication and Networks

Time allowed: 3 Hours

Max. Marks: 50

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

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I. Attempt the following: -

(a) Define bandwidth.
(b) What is the need of swiching?
(c) What is band rate?
(d) What is congestion?
(e) What is the vulnerable period in CSMA? (5×2)

UNIT-A

II. Explain construction, working principles and application of twisted pair, coaxial cable and fiberaptic cable. (10)

III. What is frame relay? Explain the frame relay protocol architecture. (10)

IV. Explain the meaning of various fields of wireless LAN frame formats. (10)

UNIT-II

V. Describe the various planes and layers of ATM reference model. (10)

VI. (a) Explain sliding window protocol in brief.
(b) Compare the important features ALOHA, CSMA and CSMA/CD protocols. (5+5)

VII. Write short notes on the following: - (5+5)

(a) Switches
(b) FDDI

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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? (5x2)

e) What is hamming distance?

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

CSE
5th SEM

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1127

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5th Semester
CS-501: Data Communication and Networks

Time allowed: 3 Hours | Max. Marks: 50

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(b) Compare the important features ALOHA, CSMA and CSMA/CD protocols. (5+5)

VII. Write short notes on the following: -
(a) Switches
(b) FDDI (5+5)

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8. I BBA IV Computerized
b. Recursive and recursively enumerable languages