Code: 13A05061 **R13**

B.Tech III Year I Semester (R13) Regular Examinations December 2015

COMPUTER NETWORKS

(Information Technology)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) What are the uses of computer network?
(b) What part of the electromagnetic spectrum is used for transmission over unguided media?
(c) What are the applications for which error detection and retransmission is not suitable?
(d) What is the main principle of Aloha? What is the channel utilization of Aloha?
(e) What is the difference between adaptive and non-adaptive routing algorithms?
(f) What are the technical parameters, using which quality of service is measured?
(g) Why transport layer is called as end-to-end layer?
(h) What are the fields of UDP header?
(i) What is the use of TELNET?
(j) What is the use of e-mail attachment feature?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 (a) What are the different guided media that are used for transmission? Explain them
(b) What are the differences between LED and Laser as source of light?
(c) What are the differences between single mode and multimode fiber?

OR

3 (a) Compare Circuit switching and Packet switching
(b) What are the layers of the TCP/IP model? What are the functions performed by each layer?

UNIT – II

4 (a) What is Hamming distance? What is the relation between hamming distance and number of bits required for error detection and correction?
(b) Given the bit sequence 1000001. Compute the hamming bits (assume even parity).
(c) How hamming distance method can be used for burst error correction

OR

5 (a) Given the bit polynomial $x^7 + x^5 + 1$ and generator polynomial $x^3 + 1$. What is the checksum (Remainder)?
(b) What is the main problem with multiple access of the channel? What are the types of solutions?

UNIT – III

6 (a) How the distance vector routing algorithm works? Give example.
(b) How choke packets can be used to control congestion?

OR

7 (a) What are the goals of IPV6?
(b) With the help of a diagram explain the IPv4 header format.

UNIT – IV

8 With the help of diagrams, explain the connection establishment and release phases of TCP.

OR

9 (a) Explain the TCP timer management.
(b) What are the performance problems in computer networks?

UNIT – V

10 (a) What are the differences between client and server?
(b) How DNS helps in using text based website names?

OR

11 (a) Explain the important tags of the HTML.
(b) How the e-mail system works?

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