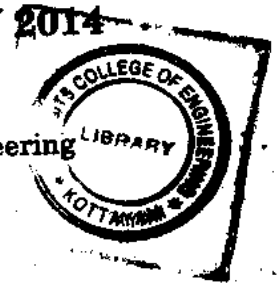
G 996 (Pages : 2) Reg. No.....

Name.....

# B.TECH. DEGREE EXAMINATION, MAY 2014




**Eighth Semester**

**Branch : Applied Electronics and Instrumentation Engineering**

**AI 010 803 – COMPUTER NETWORKS (AI)**

**(New Scheme–2010 Admissions)**

**[Regular]**

Time : Three Hours Maximum : 100 Marks

## Part A

*Answer* **all** *questions.*

*Each question carries* 3 *marks.*

1. What is the total delay for a frame size of 10 million bits that is being sent on a link with 15 routers each having a queuing time of 2 μs and a processing time of 1 μs? The length of the link is 3000 km. The speed of light inside the link is $2 \times 10^8$ m/s. The link has a bandwidth of 6 Mbps.Which component of the total delay is dominant? Which one is negligible?
2. A bit stream 10011101 is transmitted using the standard CRC method. The generator polynomial is $x^3 + 1$. Show the actual bit string transmitted.
3. What is flooding?
4. Write short note on RPC.
5. What is URL?

(5 × 3 = 15 marks)

## Part B

*Answer* **all** *questions.*

*Each question carries* 5 *marks.*

6. Write note on wireless LANs.
7. Explain stop-and-wait protocol.
8. Briefly explain multicast routing.
9. Write note on DEC bit.
10. Write note on E-mail.

(5 × 5 = 25 marks)

**Turn over**

## Part C

*Answer* **all** *questions.*

*Each full question carries* 12 *marks.*

11. Explain the various factors that impact network performance.

*Or*

12. What is OSI model? Explain the services of each layer.

13. Explain one bit sliding window protocol.

*Or*

14. Write short note on HDLC and PPP.

15. Explain spanning tree algorithm.

*Or*

16. Write note on distance vector routing.

17. Write notes on : (a) TCP ; (b) UDP.

*Or*

18. Explain TCP congestion control.

19. Write notes on : (a) WWW ; (b) DNS.

*Or*

20. What are overlay networks? Explain.


(5 × 12 = 60 marks)