

Printed Pages – 3

EC – 802

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 3049

Roll No.

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B.Tech.

EIGHTH SEMESTER EXAMINATION, 2005-2006

DATA COMMUNICATION NETWORK

Time : 3 Hours

Total Marks : 100

- Note :**
- Attempt **ALL** questions.
 - All questions carry equal marks.
 - In case of numerical problems assume data wherever not provided.
 - Be precise in your answer.

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- Attempt **any four** parts of the following : (5x4=20)
 - Explain in brief different types of mediums for communication.
 - What do you mean by Baud Rate ? Explain it in detail.
 - Explain briefly Design issues for different Layers.
 - What are the differences between Broadband and Baseband coaxial cable transmissions mediums ?
 - What is the difference between virtual and Actual communications ?
 - Explain three types of sliding window protocols ?

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2. Attempt *any four* parts of the following : (5x4=20)

- (a) Why do you understand by multiaccess channels ?
- (b) Explain key assumptions for Dynamic channels allocation in LANs and MANs.
- (c) What are the differences between Pure ALOHA and Slotted ALOHA ?
- (d) What do you understand by non-persistent CSMA ?
- (e) What do you understand by the Adaptive Tree Walk protocol ?
- (f) Describe the working principle of limited contention protocols.

3. Attempt *any two* parts of the following : (10x2=20)

- (a) Explain in detail IEEE standards 802.3 and 802.5.
- (b) Explain with the help of suitable diagram FDDI and also explain its applications.
- (c) Differentiate between wired and wireless LAN. Explain the IEEE standard used in it.

4. Attempt *any two* parts of the following : (10x2=20)

- (a) What are the services provided to the Transport Layer ? Discuss in detail. Explain the methodology of Hierarchical routing.
- (b) Explain in detail The Dijkstra's Algorithm for shortest path with the help of suitable diagrams.
- (c) What is congestion ? How it is control using token bucket as well as leaky bucket algorithms.

5. Attempt *any two* parts of the following : (10x2=20)

- (a) Explain in detail the Transport Services provided to upper layers. What do you understand by UDP.
- (b) Discuss various elements of transport protocol in details. How addressing establishing and releasing connection are achieved in this layers.
- (c) Write short notes on the following :
 - (i) Network Security
 - (ii) TCP/IP

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