

**IV B.Tech I Semester Supplementary Examinations, April/May 2005**  
**COMPUTER NETWORKS**  
**( Common to Computer Science & Engineering and Information Technology)**

**Time: 3 hours**

**Max Marks: 70**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) What does negotiation mean when discussing network protocol. Give an example.  
(b) Which of the OSI layers handles each of the following:
  - i. Breaking the transmitted bit stream into frames.
  - ii. Determine which route through subnet to use.(c) What is the main difference between TCP and UDP.
2. (a) Compare virtual circuits with circuit switching  
(b) How is transmission done in ATM networks
3. (a) Explain the operation of the protocol Go back n ?  
(b) Explain the operation of Token ring method.
4. (a) What are bridges? What key factors are considered while designing the bridges.  
(b) Explain the operation of Transparent bridge.
5. (a) Discuss the drawbacks of flooding and distance vector routing algorithms.  
(b) Explain how to subnet a class B network and the use of subnet mask.  
(c) Convert the IP address whose hexadecimal representation is C22F1582 to dotted decimal notation and explain.
6. (a) Discuss the functions of the communication subnet to provide virtual circuit services.  
(b) Explain in detail, the generic cell rate algorithm used in ATM networks.
7. (a) Derive Jacobsons relation for dynamic estimation of RTT in TCP timer management.  
(b) Discuss the problem of dynamic estimation of RTT and a solution proposed by Phil Karn.  
(c) Mention and define the different timers used by TCP.
8. Write short notes on
  - (a) Internet working

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OR

(b) E-Mail

(c) WWW

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