

**IV B.Tech I Semester Supplementary Examinations, April/May 2005
COMPUTER NETWORKS**

**(Common to Electronics & Communication Engineering, Electronics &
Instrumentation Engineering, Bio-Medical Engineering, Computer Science
& Systems Engineering and Electronics & Telematics)**

Time: 3 hours

Max Marks: 80

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

1. (a) What is Store and Forward packet switching network? Explain.
(b) What is Communication subnet boundary? Between which layers are they formed? Why?
2. (a) What are the advantages and disadvantages of twisted pair?
(b) What are the different categories of twisted pairs and explain each?
(c) Write about broadband coaxial-cable.
3. (a) Explain the need of framing in details in data link layer.
(b) The following data fragment occurs in the middle of data stream for which the character stuffing algorithm is used "DLE STX,A, DLE C, DLE, ETX". What is transmitted.
(c) If the bit string 011011111011101111110 is bit stuffed. What is the out-put string?
4. (a) Discuss in detail the different ALOHA protocols and their performance
(b) Give the principles involved in the following schemes Name an example for each one of them and their salient features.
 - i. Contention Protocol
 - ii. Contention free protocol
5. (a) What is session routing?
(b) Explain usage the IP protocol header fields.
6. (a) Explain transparent and non-transparent fragmentation and their usage.
(b) Briefly compare the network layer of Internet and ATM.
7. (a) Describe flow control?
(b) Why does the maximum packet lifetime T, have to be large enough to ensure that not only the packet, but also its acknowledgements, have vanished?
8. (a) Explain the architecture and services of E-mail.
(b) State and explain typical mail handling commands.
