

**III B.Tech II Semester Supplementary Examinations, April/May 2005**  
**DATA AND COMPUTER COMMUNICATIONS**  
( Common to Electronics & Communication Engineering and Electronics & Telematics)

**Time: 3 hours**

**Max Marks: 80**

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

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1. (a) Draw Simplified Communication model and explain in detail.  
(b) Write Short notes on transmission media.
2. What is spread spectrum? Explain the general model of spread spectrum digital communication system.
3. (a) Explain the character stuffing with suitable example.  
(b) Discuss the framing with an example.
4. (a) With neat block diagram explain the operations of FDM.  
(b) Describe the Synchronous TDM with a suitable example.
5. (a) Draw a simple packet switching network and explain how packets are transmitted from one station to another station?  
(b) How to approach the problem of transmitting data through a packet switching network when the data length is greater than maximum packet size? Discuss in detail about the various options available.
6. (a) Distinguish between the local area networks (LANs) and metropolitan area networks (MANs).  
(b) What are the functions of the lowest layer of IEEE 802 reference model.
7. List and explain different transmission structures.
8. (a) What are the principles of packet-switching?  
(b) Explain briefly about the datagram and virtual circuit switching techniques.

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