

**Bachelor of Computer Applications  
Annual Examinations – 2006**

**Paper BCAD – 403  
Computer Network**

Time allowed: Three hours

Maximum Marks: 100

*Attempt ten questions. All questions carry equal marks.*

- 1 a) Define the Asynchronous and synchronous transmission of data? What are the merits and Demerits of each over the other?
  - b) Discuss in detail
    - i) Fiber Optics Cables
    - ii) Coaxial Cables
    - iii) Twisted Pair Cables
    - iv) Microwaves
  
- 2 a) Differentiate between shielded and unshielded twisted pair cables listing down the merits and demerits of each over the other.
  - b) Explain how a parity bit is used for error detection.
  
- 3 a) Define peer to peer networking. What are advantages of peer to peer networking?
  - b) What do you mean by data rate? Discuss the relationship between data rate and bandwidth for noise less channels.
  
- 4 a) Differentiate between Analog and digital data transmission.
  - b) Differentiate between analog and digital signaling.
  
5. Discuss the various modulation techniques with the help of suitable examples.
  
6. Write short notes on the following:
  - i) Modem
  - ii) Modulation techniques
  - iii) CODEC
  - iv) Digital Transmitter
  
7. Explain OSI Reference Model in detail.
  
8. Discuss TCP/IP reference model in detail.
  
9. Distinguish between Baseband and Broadband coaxial cables.
  
10. a) Distinguish how the following cables are made.

- i) Straight through
  - ii) Cross over
  - iii) Roll over
- b) How the OSI reference model is different to TCP/IP reference model? Discuss in detail.

11. Discuss the communication channels in details.

12. Discuss the modes of transmission in detail.