

**IV Semester B.C.A. Examination, May 2011**  
**(Y2K7 Scheme)**  
**COMPUTER SCIENCE**  
**BCA 404 : Data Communication and Networks**

Time : 3 Hours

Max. Marks : 80

*Instruction : Answer all Sections.*

**SECTION – A**

Answer **any eight** questions :

**(8×3=24)**

1. Explain LAN, WAN, MAN.
2. List the advantages of Ring topology.
3. Define :
  - a) Bandwidth
  - b) Amplitude
  - c) Bitrate.
4. Write a note on IP-addresses.
5. What is Point-to-Point Protocol (PPP) ?
6. List the features of CDMA.
7. Write a note on Tunneling.
8. What is open loop and closed loop control ?
9. Define single bit error and burst error.
10. What is piggy backing ?



## SECTION - B

Answer **any four** questions :

(4×14=56)

11. a) What is switching ?  
b) Differentiate between circuit, message and packet switching based on their performance and characteristics. (2+12)
12. a) With a neat diagram explain TCP/IP model.  
b) What is multiplexing ? Explain FDM and TDM. (7+7)
13. How error detection and correction done in communication system ? 14
14. a) Explain Nyquist signalling rate and Shannon channel capacity.  
b) Explain unguided transmission media. (8+6)
15. a) Explain the characteristics of a bridge.  
b) Explain STOP and WAIT ARQ. (4+10)
16. a) Explain with a neat figure, 802.3 Frame Format.  
b) With a neat diagram explain shortest path routing algorithm. (8+6)
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