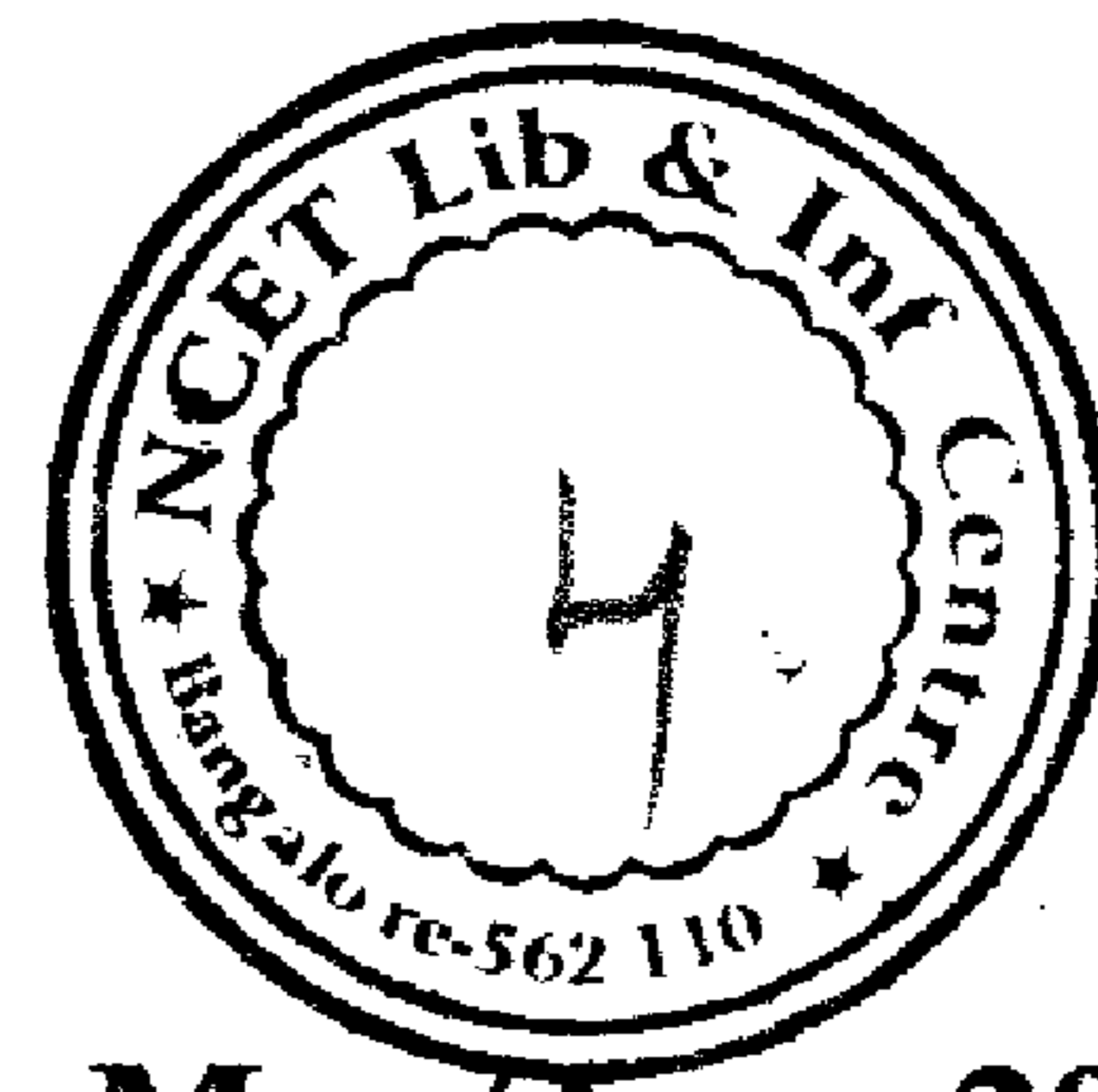


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06CS55

Fifth Semester B.E. Degree Examination, May/June 2010
Computer Networks - I

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. What is data communication? What are its characteristics and components? Explain. (06 Marks)
b. Give the comparison between LAN, MAN and WAN, with an example. (06 Marks)
c. Describe with a neat diagram, the functionalities of each layer in the TCP/IP model. (08 Marks)
- 2 a. Explain the transmission modes. (06 Marks)
b. We want to digitalize the human voice. What is the bit rate, assuming 8 bits per sample? (04 Marks)
c. Discuss 8 B/10 B coding scheme. (04 Marks)
d. Explain the delta modulation. (06 Marks)
- 3 a. An analog signal has a bit rate of 8000 bps and a baud rate of 1000 baud. How many data elements are carried by each signal element? How many signal elements do we need? (04 Marks)
b. Define synchronous TDM. (12 Marks)
c. Explain the amplitude modulation. (04 Marks)
- 4 a. Briefly explain twisted pair cable and optical fibre cable, with their applications. (10 Marks)
b. Explain the check sum, with an example. (06 Marks)
c. Explain the types of error. (04 Marks)

PART – B

- 5 a. Explain the selective repeat and stop and wait ARQ. (10 Marks)
b. Discuss HDLC protocol. (10 Marks)
- 6 a. Explain: i) CSMA ii) CSMA/CD. (10 Marks)
b. What do you mean by channelization? Explain the protocols used for channelization. (10 Marks)
- 7 a. Explain the IEEE 802.11 architecture. (08 Marks)
b. How does a virtual LAN helpful in providing (security and reduce the network traffic)? (08 Marks)
c. Explain the bridges. (04 Marks)
- 8 a. Explain the SONET/ SDH layers and frames. (12 Marks)
b. Find the data rate and duration of an STS-1 signal. (04 Marks)
c. Explain the AMPS. (04 Marks)

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...ant Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification mark to evaluator and /or equations written eg, $42+8=50$ will be treated as malpractice.