

**Total No. of Pages : 02**

**B.Tech.(CSE) / (IT) (2011 onwards) (Sem.-4)**

**Subject Code : BTCS-403**

**Time : 3 Hrs.**

**Max. Marks : 60**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

1. Write briefly :

- Define baud rate.
- What is open loop congestion control?
- Define throughput.
- Why FTP uses two connections?
- List the important features of LAN.
- What is RS 232C?
- Why twisted pair cable is twisted?
- Define interface between layers.
- What is fading?
- Differentiate between pure aloha and slotted aloha.

**SECTION-B**

2. What are the goals of computer networks? Explain in brief.
3. Differentiate between asynchronous and synchronous TDM.
4. Explain the stop and wait ARQ mechanism.
5. A company is granted the site address 201.70.64.0. The company needs six subnets. Design the subnets.
6. What is multiplexing and de-multiplexing at transport layer? Explain in brief with example.

**SECTION-C**

7. What is link state routing? Explain the steps involved with an example.
8. Given the data word 1010011010 and the divisor 10111 :
  - a. Show the generation of the codeword at the sender site (*using binary division*).
  - b. Show the checking of the codeword at the receiver site (*assume no error*).
9. What is DNS? Differentiate between recursive and iterative queries. Explain the formats of the query and response messages used in DNS.