*Seat No.: _____* *Enrolment No._____*

# GUJARAT TECHNOLOGICAL UNIVERSITY

**M.E Sem-I Regular Examination January / February 2011**

## Subject code: 710309 N
## Subject Name: Industrial Data Communication

**Date: 03 /02 /2011** **Time: 02.30 pm – 05.00 pm**
**Total Marks: 70**

## Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

| | | | |
|---|---|---|---|
| **Q.1** | | Explain in detail the Protocol using Go Back N in detail | **14** |
| **Q.2** | **(a)** | Write short note on TCP model | **07** |
| | **(b)** | Write short note on reverse path forwarding | **07** |
| | | **OR** | |
| | **(b)** | Explain interframe spacing in 802.11 protocol | **07** |
| **Q.3** | | Explain in detail about Aloha, slotted Aloha and its throughput with respect to offered traffic. | **14** |
| | | **OR** | |
| **Q.3** | | Explain in detail about CSMA (persistent and non persistent), CSMA/CD and CSMA/CA. | **14** |
| **Q.4** | | Explain various collision free protocol in detail. | **14** |
| | | **OR** | |
| **Q.4** | **(a)** | Explain adaptive tree walk protocol in detail. | **07** |
| | **(b)** | Explain wavelength division multiple access protocol. | **07** |
| **Q.5** | | Explain route discovery along with the format of the packet of Route request and format for route reply packet. | **14** |
| | | **OR** | |
| **Q.5** | | Explain the congestion control in Virtual circuit subnet. | **14** |

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