

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. Vth Semester–Examination – Nov-Dec- 2011****Subject code:150702****Subject Name: Computer Network****Date:24/11/2011****Time: 02:30 pm – 05:30 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

- | | | |
|-----|--|----------|
| (a) | What is OSI model ? Draw Diagram and Explain Physical, Data link and Network layer with its functions. | 5 |
| (b) | Discuss different types of guided and unguided media used to transmit data in the network. | 5 |
| (c) | Explain the terms : LAN, MAN, WAN, Internet | 4 |

Q.2

- | | | |
|-----------|---|-----------|
| (a) | Explain HDLC. | 07 |
| (b) | Explain Sliding window protocol using GO back to N. | 07 |
| OR | | |
| (b) | Explain STOP and Wait Protocol. | 07 |

Q.3

- | | | |
|-----------|--|----------|
| (a) | Design issues of Network Layer | 5 |
| (b) | Give ways to establish effective and Efficient network | 5 |
| (c) | Differentiate : Router and Switch | 4 |
| OR | | |

Q.3

- | | | |
|-----|---|----------|
| (a) | Design issues of Data link Layer. | 5 |
| (b) | Explain Advantages and Usage of Network | 5 |
| (c) | What is topology? Give different type of topology and its use | 4 |

Q.4

- | | | |
|-----------|---|----------|
| (a) | Explain Distance Vector Routing Algorithm | 5 |
| (b) | Compare : Ethernet and Fast Ethernet | 5 |
| (c) | Explain Multicasting | 4 |
| OR | | |

Q. 4

- | | | |
|-----|---|----------|
| (a) | Explain Shortest Path Routing Algorithm | 5 |
| (b) | Explain : MAC address and IP address | 5 |
| (c) | What is Gateway ? How it works? | 4 |

Q.5

- | | | |
|-----------|---|----------|
| (a) | Compare : TCP and UDP | 5 |
| (b) | Explain : DNS and its advantages | 5 |
| (c) | What is E-mail? How it works? Which protocol it uses? | 4 |
| OR | | |

Q.5

- | | | |
|-----|----------------------------|----------|
| (a) | Compare : IPv4 and IPv6 | 5 |
| (b) | Explain WWW and HTTP | 5 |
| (c) | What is tunneling? Explain | 4 |
