

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V • EXAMINATION – WINTER 2013****Subject Code: 150702****Date: 29-11-2013****Subject Name: Computer Network****Time: 10.30 am - 01.00 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** (a) Explain for OSI reference model with diagram. **08**  
(b) Define and explain following terms. **06**  
(1) MAN (2) Bandwidth (3) Tunneling
- Q.2** (a) How light propagates through the fiber? Explain with single and multimode fiber. **07**  
(b) What is Hamming Code? Explain how it is useful in error correction. **07**  
**OR**  
(b) Explain sliding window protocol for sender and receiver. **07**
- Q.3** (a) Explain ALOHA protocol with its varieties. **07**  
(b) What is Routing? Explain shortest path routing with example. **07**  
**OR**
- Q.3** (a) How route recovery is done in AODV protocol? **07**  
(b) Explain how congestion control is achieved in TCP? **07**
- Q.4** (a) What is a resource record? How it is useful for DNS? **07**  
(b) Give architectural overview of WWW. **07**  
**OR**
- Q.4** (a) Explain stop and wait protocol for simplex communication. **07**  
(b) Explain modulation of binary signals for Phase, Frequency and Amplitude. **07**
- Q.5** Attempt ANY FOUR **14**  
(a) Bit map protocol.  
(b) Leaky bucket algorithm  
(c) Mobile IP  
(d) User Datagram Protocol  
(e) Microwave transmission  
(f) Frequency Division Multiplexing  
(g) Virtual circuit v/s Datagram subnet.  
(h) Connection oriented v/s Connectionless services

\*\*\*\*\*