

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V EXAMINATION – WINTER 2015****Subject Code: 150702****Date: 17/12/2015****Subject Name: Computer Network****Time: 10:30am to 1:00pm****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) Enlist seven layers of OSI reference model. Discuss advantages of layered approach? **07**
(b) Give differences between connection oriented and connectionless services. **07**
- Q.2** (a) Explain following network topologies with advantages and disadvantages. **07**
1. Bus
2. Star
3. Ring
4. Mesh
(b) What is the difference between guided and unguided transmission media? Write briefly about twisted pair. **07**
- OR**
- (b) Write a short note on fiber optic cable. **07**
- Q.3** (a) What do you mean by framing? List various framing techniques and explain any two of them. **07**
(b) Write a short note on sliding window protocols. **07**
- OR**
- Q.3** (a) What is error control? Explain CRC with example **07**
(b) Explain following **07**
- Piggy backing
- Selective Repeat and Go back N
- Q.4** (a) Explain various versions of CSMA protocols. **07**
(b) Explain shortest path routing with suitable example. **07**
- OR**
- Q.4** (a) Apply binary, Manchester and differential Manchester encoding on following bit pattern 10110111 **07**
(b) Explain distance vector routing mechanism with example. **07**
- Q.5** (a) Explain the concept of congestion control with example. **07**
(b) Write a note on HTTP. **07**
- OR**
- Q.5** (a) Draw and explain TCP packet header. **07**
(b) What is the need of Domain name service? Explain DNS architecture. **07**
