

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V • EXAMINATION – SUMMER • 2015

Subject Code: 150702

Date: 05-05-2015

Subject Name: Computer Network

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 (a)** Explain following terms with respect to Computer Network **06**
(1) Broadcasting (2) Bluetooth (3) Routing
(4) Socket (5) IP Address (6) VLAN
- (b)** Draw the OSI reference model. Explain the functionality of each layer in brief. **08**
- Q.2 (a)** Explain the role of fiber optics in computer networks. How a fiber optic network is formed? **07**
- (b)** Explain ALOHA system. How slotted ALOHA works? Differentiate it with pure ALOHA. **07**
- OR**
- (b)** What is a Frame? Explain the significance of stuffing. Explain bit stuffing with example. **07**
- Q.3 (a)** Describe the working of sliding window protocol. Also explain the piggybacking phenomenon. **07**
- (b)** Explain shortest path routing with example. **07**
- OR**
- Q.3 (a)** What is MANET? Explain route discovery in AODV protocol with example. **07**
- (b)** Explain Distance Vector routing with example. **07**
- Q.4 (a)** What is RPC? Draw and explain steps for RPC. **07**
- (b)** Explain the concept and need of tunneling with example. **07**
- OR**
- Q.4 (a)** Explain Transmission Control Protocol with TCP header fields. **07**
- (b)** What is DNS? How resource records are maintained in DNS? **07**
- Q.5 (a)** Write a note on HTTP. **07**
- (b)** Explain connection oriented and connectionless services. Also differentiate both. **07**
- OR**
- Q.5 (a)** List and explain major functionalities provided by E-mail service. **07**
- (b)** What is CSMA? Explain persistent and nonpersistent CSMA. **07**
