

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V- EXAMINATION – SUMMER 2016

Subject Code: 150702

Date: 21/05/2016

Subject Name: Computer Network

Time: 02:30 PM to 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) Write a note on Guided and Un-Guided transmission medium. **07**
(b) What is OSI model? Draw Diagram and Explain Physical, Data link and Network layer with its functions. **07**
- Q.2** (a) Explain Ethernet Frame structure. **07**
(b) Explain Sliding Window Protocol. **07**
- OR**
- (b) What is ALOHA? Explain variants of ALOHA protocol. **07**
- Q.3** (a) What is the difference between error detection and correction? Explain any one error correction technique with suitable example. **07**
(b) Explain IPv4 datagram format and importance of each field. **07**
- OR**
- Q.3** (a) Explain subnetting with an example. **07**
(b) Compare the IPv4 and IPv6. **07**
- Q.4** (a) Explain Link-State Routing algorithm. **07**
(b) What is count-to-Infinity problem? Explain it with example. **07**
- OR**
- Q.4** (a) Explain the working of electronic mail protocols SMTP, IMAP and POP3 in brief with suitable diagram. **07**
(b) Explain ARP and justify why ARP query sent within a broadcast frame and ARP response sent within a frame with specific destination MAC address? **07**
- Q.5** (a) Draw and explain TCP packet header. **07**
(b) Differentiate the following: **07**
(i) Connection Oriented Services and Connection Less Services
(ii) OSPF and BGP
- OR**
- Q.5** (a) What is the role of Domain Name Server (DNS) in Internet? Explain the hierarchy of various domain names. **07**
(b) Explain the following terms in brief: **07**
(i) Bandwidth (ii) Propagation delay (iii) Queuing Delay (iv) Throughput
(v) FDM (vi) MIME (vii) Burst Error
