

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (OLD) EXAMINATION – WINTER 2018****Subject Code:150702****Date: 27/11/2018****Subject Name: Computer Network****Time: 10:30 AM TO 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) Give basic functionalities of TCP/IP and OSI reference models. Differentiate them **07**  
(b) What is network topology? Give its types and explain them. **07**
- Q.2** (a) What do you understand by Guided and Unguided media? Explain with examples. **07**  
(b) Explain TCP for network layer of OSI **07**
- OR**
- (b) Explain UDP for network layer of OSI **07**
- Q.3** (a) How sessions are created and terminated? Explain with respect to Transport layer functionality. **07**  
(b) What is Ad-hoc network? List MANET protocols and explain any one. **07**
- OR**
- Q.3** (a) What is Hamming Code? Explain how it is useful in error correction. **07**  
(b) Explain Leaky bucket algorithm. **07**
- Q.4** (a) What is ALOHA protocol? Differentiate ALOHA and slotted ALOHA. **07**  
(b) Explain modulation of binary signals for Phase, Frequency and Amplitude. **07**
- OR**
- Q.4** (a) When tunneling is used? How it is useful in communication? **07**  
(b) What is congestion? Explain its control in virtual circuit and datagram subnets. **07**
- Q.5** (a) What is CSMA? Explain persistent and non-persistent CSMA. **07**  
(b) What is the use of DNS? How it is useful in internet browsing? **07**
- OR**
- Q.5** (a) What is CDMA? Explain with timing diagram and example. **07**  
(b) What is an E-mail server? Explain its functionalities. **07**

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