

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII (OLD) EXAMINATION – SUMMER 2019****Subject Code: 181101****Date: 13/05/2019****Subject Name: Data Communication And Networking****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) Compare and contrast OSI reference model and TCP/IP reference model. **07**
(b) Differentiate between unguided and guided transmission media and explain guided transmission media in detail. **07**
- Q.2** (a) Differentiate between Hub, Switches and Routers. Also define active hub and passive hub. **07**
(b) Write a short note on PSTN. **07**
- OR**
- (b) Write a short note on Bluetooth. **07**
- Q.3** (a) Explain the channel allocation problem and its solution in detail. **07**
(b) Enlist the multiple access protocol used in wireless network. Explain any two of them in detail. **07**
- OR**
- Q.3** (a) Explain Link state routing algorithm in detail. **07**
(b) Explain Vertical Redundancy Check, Longitudinal Redundancy Check and Cyclic Redundancy Check with example. **07**
- Q.4** (a) Give the cause of congestion in the network. Explain leaky bucket algorithm and token bucket algorithm. **07**
(b) Explain SMTP and HTTP protocols in detail. **07**
- OR**
- Q.4** (a) Write a short note on UDP. **07**
(b) Differentiate between IPv4 and IPv6. **07**
- Q.5** (a) With the help of a neat diagram explain how ARP and RARP work. **07**
(b) Write a short note on Digital Signature. **07**
- OR**
- Q.5** (a) Discuss various social issues related to security over Internet. **07**
(b) Write a short note on Domain Name System. **07**
