

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2018**

**Subject Code: 2163204**

**Date: 08/05/2018**

**Subject Name: Telecommunication Engineering**

**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) Write a short note on PCM. **03**  
(b) Explain Time Division Time Switch. **04**  
(c) Explain distributed SPC and level 3 processing in detail and also explain hardwired and micro programmed control system. **07**
- Q.2** (a) List the difference between Single stage and Multi stage network. **03**  
(b) Explain Sampling and Quantization. **04**  
(c) Explain centralized SPC and also explain the drawback of it. **07**
- OR
- (c) Explain VOCODER in Detail. **07**
- Q.3** (a) Discuss operations of synchronous duplex mode of stored program control **03**  
(b) Discuss operations of load sharing mode of stored program control. **04**  
(c) Draw and Explain the basic scheme for Common Channel Signaling. **07**
- OR
- Q.3** (a) Discuss operations of Standby mode of stored program control **03**  
(b) Define:-Erlang, CCR , BHCA, Grade of service. **04**  
(c) Classify signaling technique & Discuss architecture of SS7. **07**
- Q.4** (a) Define following terms: 1)busy hour 2) peak busy hour 3)time consistent busy hour **03**  
(b) Write a short note on Compadding. **04**  
(c) Explain the N X N three stage switching network. Draw the Lee's graph to discuss its blocking probability. **07**
- OR
- Q.4** (a) In a group of 10 servers, each occupied for 30 minutes in an observation interval of two hours. Calculate the traffic carried by the group. **03**  
(b) Discuss Three-party Conferencing connection. **04**  
(c) Explain ISO-OSI Reference Model with functionality of each layer. **07**
- Q.5** (a) What are the broad categories of the enhanced services? **03**  
(b) Compare Inband & Outband Signaling. **04**  
(c) Explain in detail LCC system with finite subscribers with derivation of blocking probability and GOS. **07**
- OR
- Q.5** (a) Explain line coding. **03**  
(b) Compare Circuit Switching vs. Packet Switching. **04**  
(c) List charging plan for Telecommunication and discuss any two **07**