

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (OLD) EXAMINATION – WINTER 2018****Subject Code:141102****Date: 12/12/2018****Subject Name: Communication Engineering****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) Discuss the need of communication. With block diagram explain the communication system. **07**
(b) Define Noise. Classify the different types of noise. **07**
- Q.2** (a) What is Modulation and Demodulation? Explain need of Modulation. **07**
(b) List out the SSB generation methods and explain any one in detail. **07**
- OR**
- (b) Explain VSB Modulation in detail. **07**
- Q.3** (a) Write short note on Foster-Seeley Discriminator. **07**
(b) Derive the Friss formula for overall noise factor of amplifiers in cascade. **07**
- OR**
- Q.3** (a) Write short note on Superhetrodyne receiver. **07**
(b) Discuss FM Modulation and Demodulation in detail. **07**
- Q.4** (a) Write short note on Telegraphy and Telemetry. **07**
(b) What are the advantages of digital communication over analog communication? Draw and explain the block diagram of PCM system. **07**
- OR**
- Q.4** (a) What do you mean by multiplexing? Discuss types of multiplexing techniques. **07**
(b) Compare AM, FM, and PM. **07**
- Q.5** (a) Write short note on Television standards. **07**
(b) Discuss losses occurs in fiber optic communication. **07**
- OR**
- Q.5** (a) Discuss the advantage and disadvantage of optical fiber communication over wire communication. **07**
(b) Draw and explain block diagram of monochrome TV system (transmitter and receiver). **07**
