

Time: 3 Hours

Marks: 80

- N.B: 1. Question No 1 is compulsory
2. Answer any three from the remaining.

1. Attempt all questions. (20M)
 - (a) Compare Twisted Pair, Co axial and Fiber optic communication channel.
 - (b) State and prove convolution property of the Fourier Transform.
 - (c) Define Image Signal and explain Image signal rejection ration.
 - (d) What is aliasing? How to eliminate it?
2.
 - (a) Derive Friss formula. (5M)
 - (b) Derive the Fourier transform of Unit Step and Delta Function? (5 M)
 - (c) Derive the expression for FM. (10M)
3.
 - (a) Explain how to generate DSBSC AM with neat diagram. (10M)
 - (b) Explain the working of Foster seeley discriminator with neat circuit diagram and phasor diagram. (10M)
4.
 - (a) Define Sampling and explain how to generate and demodulate PAM with neat diagram? (10M)
 - (b) Explain Delta modulation with neat diagram. (10M)
5.
 - (a) Explain BASK Generation and detection with neat diagram. (10 M)
 - (b) Explain and draw any five types of Line codes. (10 M)
6. Write a short note on any four from the following (20M)
 - a) Wireless Communication Channel
 - b) State and prove time shifting property of Fourier Transform.
 - c) Pulse width modulation generation.
 - d) QPSK
 - e) Quantization process.
