Roll No. .....

24147

B. Tech. 4th Sem. (EEE) (Re-appear) Examination – October, 2020

PRINCIPLES OF COMMUNICATION SYSTEM

Paper : EE-220-F

Time : 1.45 Hours] *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any ***three*** questions. All questions carry equal marks.

1. (a) Give out classification of signals.

(b) Give out the advantages of VSB modulation method.

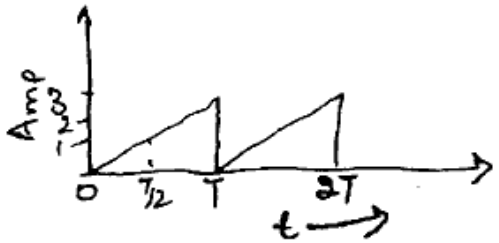
(c) Why PCM is not used for radio communication ?

(d) Define and explain noise figure.

(e) Tabulate the comparison FSK and PSK.

2. (a) Draw block diagram of communication system and explain function of each block.

(b) Carry out the Fourier analysis of given wave form :



3. (a) Tabulate difference between analog and digital communication.

(b) Why channel multiplexing is required ? Explain FDM in details.

4. (a) State Amplitude modulation and derive the mathematical equation for single tone amplitude modulated signal.

(b) Draw the block diagram for generation of SSB signal. Also give out its limitations.

5. (a) Discuss Frequency demodulation using Ratio detector method.

(b) How Narrowband FM can be generated using PM and vice-versa ?

6. (a) What do you understand by Nyquist rate ? Explain and prove sampling theorem.

   (b) Discuss demodulation of PWM signal with the help of wave diagram.

7. (a) Draw the block diagram of PCM receiver and explain working of each block.

   (b) Explain generation and detection of DPCM signal.

8. (a) Explain generation of BPSK signal. Derive the equation and draw the block diagram.

   (b) Explain working of QPSK transmitter.

9. (a) Explain mechanism for Mary PSK signal demodulation.

   (b) Write briefly about Internal noise. Can it be controlled or minimized ?