

B.Sc. S.Y. (New CBCS Pattern) Semester - IV
USELT07 - Electronics Paper-I (Communication Electronics)

P. Pages : 2

Time : Three Hours



GUG/S/23/12006

Max. Marks : 50

-
- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labeled diagrams wherever necessary.
3. Use of log table / calculator is allowed.

Either:

1. a) Draw the block diagram and explain each block of communication system. 7+3
Define noise and explain signal to noise (S/N) ratio.

OR

- b) Draw electromagnetic communication spectrum chart or table. 6+4
Explain the necessity of band designation in communication system.

Either:

2. a) Define amplitude modulation. Explain it with suitable waveform. 2+4
Derive the expression for modulation index of amplitude modulation. +4

OR

- b) Explain the frequency modulation with suitable waveform. 6+4
State the comparison between FM and PM.

Either:

3. a) Explain the generation of FM using VCO. 7+3
State and explain sampling theorem.

OR

- b) Explain the basic principles PAM. 5+5
Explain the modulation and detection technique for PAM?

Either:

4. a) Explain digital FSK modulation with suitable diagram. 5+5
Draw the block diagram of pulse code modulation and explain it.

OR

- b) What is CDMA? How is it differing from TDMA? 2+4
Explain the concept of GSM. +4

5. Attempt **any ten** of the followings.

- a) What is communication? 1
- b) What is Base band signal? 1
- c) State any two types of noises. 1
- d) Sate any two advantages of amplitude modulation. 1
- e) What is demodulator? 1
- f) Define phase modulation. 1
- g) What is multiplexing? 1
- h) State any two advantages of Superheterodyne receiver. 1
- i) What is PWM? 1
- j) Write the concept of ASK. 1
- k) State full form of GSM and CDMA. 1
- l) What is GPS system? 1
