

Roll No.

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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(EE) (2012 Onwards E-I)
(Sem.-6)

PRINCIPLES OF COMMUNICATION SYSTEMS

Subject Code : BTEE-605E

M.Code : 71156

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Answer briefly :

- a) Why is time division multiplexing and frequency division multiplexing?
- b) How the signal is frequency modulated? Show waveform of frequency modulation.
- c) What do you understand by pulse-position modulation method?
- d) What is the special feature of double side band transmitter?
- e) Compare the amplitude modulation, frequency modulation and pulse modulation.
- f) What is the function of picture tube in TV?
- g) What is the significance of independent side band receiver?
- h) Why is it essential to use radio frequency telemetry?
- i) Differentiate low and high level amplitude modulation.
- j) What are the characteristics of radio receiver?

SECTION-B

2. What is pulse-code modulation? What are its types, explain with the help of neat waveforms?
3. How frequency modulation receiver works explain with the help of neat block diagram?
4. Discuss the working of radio receiver.
5. What is the functioning of television receiver and television transmitter with the help of block diagram?
6. Explain Phase locked loop with the help of diagram.

SECTION-C

7. Differentiate the raster and random scanning in Television. How the television video and audio system works? Elaborate.
8. What are radio transmitters? Explain in detail the types of radio transmitters. Elaborate the working of Armstrong frequency modulation transmitters, low and high level amplitude modulation transmitter.
9. How frequency modulated signal are detected? With the help of block diagram explain the functioning of frequency modulation receiver and stereophonic frequency modulation broadcast receiver.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.