Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech.(EE)/(Electrical & Electronics) (2011 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) Define Amplitude modulation.

   (b) Define frequency modulation.

   (c) What do you understand by the principle of the camera?

   (d) Define time division multiplexing.

   (e) Give advantages and disadvantages of frequency division multiplexing.

   (f) Explain the properties of practically realizable filter.

   (g) Explain the concept of independent sideband transmitter.

   (h) What do you mean by vestigial sideband transmission?

   (i) What do you mean by pulse amplitude modulation (PAM)?

   (j) Define double side band and single side band.

## SECTION-B

2. Classify the tuned radio frequency receiver and super heterodyne receiver.

3. What is the necessity of Non-uniform Quantization in PCM system?

4. Draw and explain the diagram of picture tube of T.V.

5. Compare the pulse position modulation and pulse code modulation.

6. Why and how phase lock loop is used in amplitude modulation receiver?

## SECTION-C

7. Explain the working and draw the block diagram of the television receiver and transmission.

8. Explain the different types of modulation along with diagrams. Also give its advantages and limitations.

9. Explain and drive the Fourier series and Fourier transform of periodic signals.

**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.**