S.B. Roll No……

# COMMUNICATION SYSTEMS-I

**4th/ECE/ETV/EMP/ECE(II)/6127/2361/May'16**

**Duration: 3 Hrs** **M. Marks=75**

## SECTION A

**Q1. Fill in the blanks.** **1x15=15**

**i.** LASER stands for …… .
**ii.** ……. is joint between two fibers.
**iii.** FDMA stands for …… .
**iv.** Crystal oscillator is used for increasing the …… .
**v.** Pre-emphasis and de-emphasis improves the …… Ratio.
**vi.** The ……. of the receiver is the ability to reject unwanted signals.
**vii.** The electromagnetic signals are also called ……. .
**viii.** The frequency range of VHF band is from ……. To …… .
**ix.** The orbits passing over the north and the south pole is called …… .
**x.** The FM broadcast frequency range is …….. .
**xi.** AGC stands for ……
**xii.** The unit of attenuation is ……
**xiii.** The refractive index of core is …… than that of the cladding.
**xiv.** A ……. Antenna is used as an high frequency transmitting antenna.
**xv.** VCO stands for ……. .

## SECTION B

**Q2.Attempt any SIX** **5x6=30**

**a.** Explain briefly the different types of transmitters?
**b.** Explain the concept of simple and delayed AGC**.**
**c.** Describe the working of LED.
**d.** Differentiate between active and passive satellites.
**e.** Explain yagi-uda antenna .
**f.** Explain the need of limiting and de-emphasis in FM reception.
**g.** Discuss different types of optical fibres.
**h.** What is geo stationary satellite? Explain its need.

## SECTION C

**Q3.Attempt any THREE** **10x3=30**

**a.** With the help of block diagram, explain the working of fiber optic communication link. Also list a few advantages of fiber optic communication.
**b.** Draw and explain superhetrodyne receiver.
**c.** Differentiate between ground, Sky and space wave propagation.
**d.** Write short note on any two:
  **I)** Splicing
  **II)** Radiation pattern
  **III)** fading