

Name of the Course : B.Sc. Prog.(Electronics)–CBCS\_Core  
Semester : III Semester  
Name of the Paper : Communication Electronics  
Unique paper Code : 42514305\_NC  
Maximum Marks : 75

**Attempt any *Four* Questions. All Question Carry Equal Marks.**

Q1. Explain the advantages of geostationary satellites. Explain with the help of a suitable block diagram Transponder (C-band) and downlink stations in Satellite communication.

Q2. Distinguish between IMEI number and IMSI number. Draw and explain the block diagram of Mobile phone handset.

Q3. Explain with the help of a suitable block diagram the generation of PCM signal. Discuss TDM and FDM in detail.

Q4. Explain Super-heterodyne receiver. An angle modulated wave is described by  $x(t) = 10\cos[2\pi(10^6)t + 0.1\sin((10^3)\pi t)]$ . Draw the message signal in frequency and time domain by first considering  $x(t)$  as frequency modulated wave and then as phase modulated wave.

Q5. Explain different bands of Electromagnetic Spectrum along with their usage. What will be the maximum power saving that can be achieved in SSB-SC as compared to DSB-FC?

Q6. Distinguish between AM, FM and PM with the help of suitable waveforms. A 75 MHz carrier having amplitude of 50V is amplitude modulated by a 3 KHz audio signal having amplitude of 20 V. Sketch audio signal and carrier signal. Construct the amplitude modulated wave in time and frequency domain.