

GUJARAT UNIVERSITY

B.E. SEM-VI (Instrumentation and Control) Question Bank-2013

SUBJECT NAME: ELECTRONIC COMMUNICATION (IC 601)

All questions carry equal marks (10 marks)

Q.1	List various types of Noise. Explain Thermal Agitation Noise in detail
Q.2	Explain Amplitude Modulation in detail.
Q.3	Explain & Derive signal to Noise ratio with equation.
Q.4	Define Modulation. What is the need of Modulation?
Q.5	Explain Frequency Modulation with its mathematical representation in detail.
Q.6	Explain AM transmitter in detail with block diagram.
Q.7	The antenna current of an AM broadcast transmitter, modulated to a depth of 40 % by an audio sine wave is 11 A. It increases to 12 A as a result of simultaneous modulation by another audio sine wave. What is the modulation index due to this second wave?
Q.8	List various techniques for suppression of unwanted Sidebands. Explain Filter System in detail.
Q.9	Explain pulse width modulation in detail.
Q.10	The mutual conductance of an FET varies linearly with gate voltage between the limits of 0 and 9 mS. The FET is used as a capacitive reactance modulator, with $X_{Cgd} = 8R_{gs}$, and is placed across an oscillator circuit which is tuned to 50 MHz by a 50-pF fixed capacitor. What will be the total frequency variation when the transconductance of the FET is varied from zero to maximum by the modulating voltage?
Q.11	Explain pulse code modulation in detail.
Q.12	Give a comparison between Frequency and phase modulation.
Q.13	Define Noise Figure. Derive the equation of the same.
Q.14	Explain Tuned Radio frequency receiver in detail.
Q.15	Mention advantages and application of pulse code modulation.
Q.16	What is modem? Explain in detail the role of modem in communication.
Q.17	Write a short note on intermediate frequency amplifiers.
Q.18	Write a Short Note on Cross talk
Q.19	Explain Parity check codes
Q.20	Explain Super heterodyne receiver.
Q.21	Explain Frequency shift keying
Q.22	Explain Hamming code
Q.23	Describe The types of Receiver
Q.24	Give a comparison between AM Receivers and FM receivers
Q.25	Explain The Communications Receivers in brief.
Q.26	Explain & Draw Block Diagram of fundamentals of data communications systems

Q.27	Explain requirements of data Sets and interconnection requirements of Digital System
Q.28	Give a comparison between Analog Communications and Digital Communications.
Q.29	Give a comparison between PPM, PCM & PWM
Q.30	Explain Classification of Modem.
Q.31	How to Interface Modem in Digital Communication
Q.32	Explain Parity and Discuss its use for data Transmission System
Q.33	Describe the RS-232 Interface and Explain its value for data transmission
Q.34	Discuss the differences between various Modems, and Explain the significance of the differences.
Q.35	Explain The Concept of Cellular telephone
Q.36	Explain cellular system protocol and testing
Q.37	Explain basic and advanced paging systems of Cellular telephone
Q.38	Explain the next generation cellular systems
Q.39	Explain the basic function of advanced wireless systems
Q.40	Explain Advantages & Disadvantages of advanced wireless systems