

**Technology: Electronics  
Subject : Communication Engineering-1  
Subject Code :6842**

**Lecture Plan-2014**

**Mobile-01761 75 12 75**

<b>Class No</b>	<b>Topics</b>	<b>Remarks</b>
<b>Class-1</b>	❖ <b>Understand the signals and spectra</b>	
<b>Class-2</b>	➤ Describe the allocation of frequency bands for various communication system.& Explain the nature of different signals and their frequency ranges.	
<b>Class-3</b>	❖ Describe the basic building block of a communication system.	
<b>Class-4</b>	🚦 <b>Feed Back (Lecture: 1,2&amp;,3)</b>	
<b>Class-5</b>	➤ <b>Understand the Noise in telecommunication system.</b>	
<b>Class-6</b>	<b>Define Signal-to-Noise ratio.Describe the noise figure. Mention the different types and sources of noise.Describe the different noise.</b>	
<b>Class-7</b>	🚦 <b>Feed Back (Lecture: 5,6)</b>	
<b>Class-8</b>	❖ <b>Understand Amplitude modulation</b>	
	➤ <b>Define Amplitude modulation. Describe the basics of AM modulation Derive the expression of AM modulation. Define modulation index and depth of modulation.</b>	
<b>Class-09</b>	❖ <b>Describe the idea of DSB-SC, SSB-SC and V.S.B modulation.</b>	
	❖ <b>Solve problem related with band width and side band power</b>	
<b>Class-10</b>	🚦 <b>Feed Back (Lecture: 8&amp;,9)</b>	
<b>Class-11</b>	❖ <b>Understand the frequency and pulse modulation</b>	
	➤ <b>Derive the expression for frequency modulated wave. Explain the FM spectra and bandwidth.</b>	
<b>Class-12</b>	➤ <b>Describe the idea of modulation index, maximum frequency deviation and deviation ratio of FM wave. State the method of generation of PPM, PDM and PWM signal. Describe the comparison of AM , FM and PM</b>	
<b>Class-13</b>	🚦 <b>Feed Back (Lecture: 11,&amp;12)</b>	
<b>Class-14</b>	➤ <b>Understand the feature of AM and FM modulator</b>	
	➤ <b>Explain the basic operation of collector modulator, base modulator and balanced modulator.</b>	
<b>Class-15</b>	➤ <b>Understand the demodulation of AM waves</b>	
	➤ <b>Explain the principle of operation of linear diode detector. State the concept of diagonal clipping .</b>	
<b>Class-16</b>	🚦 <b>Feed Back (Lecture:14&amp;15)</b>	
<b>Class-17</b>	❖ <b>Model Test-1</b>	
<b>Class-18</b>	➤ <b>Understand the demodulation of FM wave</b>	
<b>Class-19</b>	❖ <b>Explain the basic principle of detection of FM wave. State the function of limiter circuit&amp; List the methods of FM demodulation.</b>	
<b>Class-20</b>	➤ <b>Describe the foster-Seeley discriminator and its working principle. State ratio detector.</b>	
<b>Class-21</b>	🚦 <b>Feed Back (Lecture: 18,19&amp; 20)</b>	
<b>Class-22</b>	🚦 <b>Understand the Radio Transmitter</b>	
<b>Class-23</b>	➤ <b>Explain the block diagram of AM transmitter with function of each state. Explain the block diagram of stereo FM transmitter with</b>	

**Technology: Electronics  
Subject : Communication Engineering-1  
Subject Code :6842**

**Lecture Plan-2014**

**Mobile-01761 75 12 75**

	resulting spectrum.	
Class-24	✚ Understand the radio receiver	
Class-25	➤ Explain the block diagram of super heterodyne AM radio receiver with function of each block .	
Class-26	✚ Feed Back (Lecture: 22,23,24 & 25)	
Class-27	➤ Explain a typical IC based AM and FM radio receiver circuit & Explain choice, alignment and tracking, IF and band switch of a radio receiver	
Class-28	✚ Understand the feature of Telephone	
Class-29	➤ Describe briefly telegraphy and telephony system.& Describe the working principle of telephone handset transmitter and receiver	
Class-30	✚ Feed Back (Lecture: From 27 to 29)	
Class-31	➤ Describe the tones used in automatic telephone.Describe different type of dialing system. Define the terms traffic, busy hour traffic unit, grade of service, availability and erlong's formula	
Class-32	➤ Understand the concept of digital communication. ➤ Describe the quantization & coding principle of PNM & PCM & Describe the functional diagram of PNM & PCM	
Class-33	➤ Explain the methods of reducing quantization noise, fold-Over noise and Interpolation noise.	
Class-34	✚ Feed Back (Lecture: From 30 to 33)	
Class-35	➤ Understand the modulation of digital data. Explain the methods of quadrature amplitude modulation(QAM).	
Class-36	➤ Understand the transmission media. Describe the construction of twisted pair (UTP,STP), c	
Class-37	✚ Model Test-2	

**References Books**

1. Electronic communication systems – William Schweber
2. Electronic communication systems – Kenedy, Devis
3. Electronic communication - Dennis Roody, John Coolen
4. Principles of communication engineering – Anok Singh & A.K Chhabara

Prepared by  
**MD-ASADUZZAMAN**  
**JUNIOR INSTRUCTOR**  
**DEPARTMENT OF ELECTONICS**