

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING  
AND TECHNOLOGY

**PRINCIPLES OF ELECTRONIC COMMUNICATION**

**MODEL QUESTION PAPER – SET-1**

Time: 3 hours

Maximum Marks: 75

**PART A**

**I. Answer all the following questions in one word or sentence.**

**(9 x 1 = 9 Marks)**

Module Outcome Cognitive level

1	Define Amplitude modulation	M1.01	R
2	Define Bandwidth in AM	M1.04	R
3	Show the expression for AM modulated wave	M1.03	R
4	Find the equation for calculating sampling rate.	M2.01	R
5	Define PCM	M2.02	R
6	Name the circuit used in transmitter for boosting the high frequency signals.	M3.01	R
7	Define Signal to Noise ratio	M3.03	R
8	Define selectivity in radio receiver	M4.01	R
9	Find the value of IF in AM receiver	M4.02	R

**PART B**

**II. Answer any Eight questions from the following**

**(8 x 3 = 24 Marks)**

Module Outcome Cognitive level

1	Name different types of modulation techniques.	M1.01	R
2	Solve the equation for modulation index in AM.	M1.04	A
3	Outline the various pulse modulation techniques.	M2.02	U
4	Recall and state sampling theorem.	M2.01	R
5	List the applications of microwave antenna.	M2.03	R
6	Identify the applications of high level modulation.	M3.01	A
7	List the advantages of Collector modulation.	M3.02	R
8	Identify the significance of balanced modulator.	M3.02	U

9	How can you choose the value of IF in radio receivers?	M4.02	U
10	Summarize the applications of frequency modulation.	M4.02	U

### PART C

#### III. Answer all questions from the following

**(6x 7 = 42 Marks)**

Module Outcome Cognitive level

1	Explain and derive the expression for AM modulated signals and draw the AM wave.	M1.03	U
OR			
2	Explain and derive the expression for FM modulated signals and draw the FM wave.	M1.03	U
3	Compare different parameters of DSBSC and SSB systems in AM.	M1.02	U
OR			
4	Describe the generation of PWM signals	M2.02	U
5	Compare various pulse modulation techniques	M2.02	U
OR			
6	Describe Microwave antennas and its applications.	M2.03	U
7	Describe the block diagram of AM Transmitter	M3.01	U
OR			
8	Describe the block diagram of FM Transmitter	M3.01	U
9	Explain internal noises generated in communication systems	M3.03	U
OR			
10	Describe the working of AM diode detector circuit	M4.03	U
11	Explain the working of AM superheterodyne radio receiver	M4.02	U
OR			
12	Explain the working of FM superheterodyne radio receiver	M4.02	U