PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
Diploma Engineering, Mid semester Examination

Semester: 3   **Date: (05/08/2022)**
Subject Code: (03608201)   **Time: (1hr: 30min)**
Subject Name: (Principal of Electronic Communication)   **Total Marks: 40**

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

Q.1	**Answer any six out of Ten. (2 Marks Each)**	**(12)**
	1. Define: Modulation.	
	2. Define: Analog & Digital signal.	
	3. Define: Amplitude modulation.	
	4. Define: Frequency modulation.	
	5. Define: PAM.	
	6. Define: PWM.	
	7. Define: PPM.	
	8. Define: Modulation index.	
	9. Define: Demodulation.	
	10. State the application areas of SSB.	
Q.2	A) What is the need of modulation?	**(03)**
	OR	
	A) What are the advantage & disadvantage of SSB?	**(03)**
	B) Compare SSB & DSB.	**(03)**
	OR	
	B) Compare FM & PM.	**(03)**
	C) Draw frequency spectrum of AM wave.	**(04)**
	OR	
	C) Explain the Sampling Theorem.	**(04)**
	D) Draw & Explain the block diagram of basic analog communication system.	**(04)**
Q.3	A) Compare Low level & High level modulation.	**(03)**
	OR	
	A) Draw and Explain AM modulator circuit.	**(03)**
	B) Explain the factor effecting the selection of intermediate frequency	**(03)**
	OR	
	B) Compare Wideband & Narrowband of FM.	**(03)**
	C) Voltage equation for AM signal.	**(04)**
	OR	
	C) Derive the modulation index for AM wave in terms of maximum and minimum amplitude.	**(04)**
	D) Explain signal noise ratio and noise figure.	**(04)**