XAVIER INSTITUTE OF ENGINEERING

Mahim, Mumbai 400016

Department of Information Technology

(NBA Accredited)

(Approved by AICTE, Govt. of Maharashtra and Affiliated to University of Mumbai)

Class: SE Semester: III
AY:2023-24
Innovation/Creativity of Teaching and learning activity

Class- S.E. (IT)
Course Name – Principle of Communication
Course code- ITC304
Activity – Analyzing the Scenario
Objective- To improve the knowledge of understanding and recollect the subject concepts.
Date of Conduction: 27/07/2023

CO Mapped: CO1 – Interpret and Differentiate analog and digital communication systems

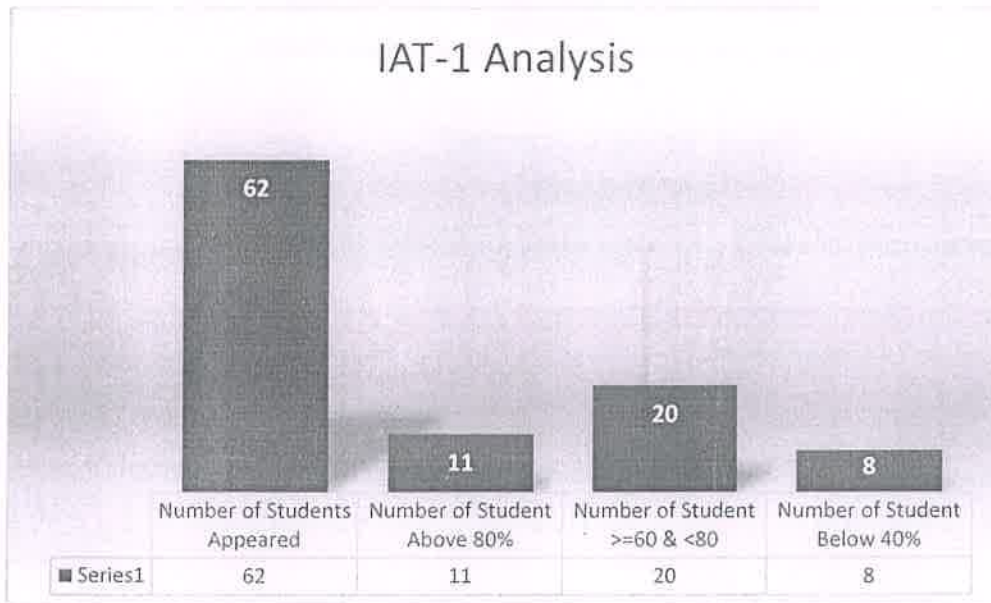**PO Mapped:** PO1,2,8,9,10,12

Method – Offline Activity

The class assignment of Analysing Puzzle from Module 1 was given to SE-IT students. Module 1 shows the basic differentiation between analog and digital signals. The puzzle-solving efforts of the students were evaluated. Additionally, the student' exam performance has improved.

Outcome-

1. **Students can gain comprehensive understanding in the field of principle of communication subject**
2. **This activity enhances the technical knowledge and improves the self-learning capability, confidence, critical thinking skills of students.**

The performance of the students increased in the Internal Assessment Exam.

IAT-1 Performance:

IAT-1 Analysis

	Number of Students Appeared	Number of Student Above 80%	Number of Student >=60 & <80	Number of Student Below 40%
■ Series1	62	11	20	8

Subject in-charge

Prof. Stella J

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Activity 1

Subject: Principle of Communication   Class: SE-IT
Date: 27/07/2023   Subject In-charge: Prof. Stella J

CO1: Interpret and Differentiate analog and digital communication systems
PO: PO1, PO2, PO8, PO9, PO10, PO12

1. Find me
I am in the process of communication and I will always convert the input to electrical signal. Who am I?
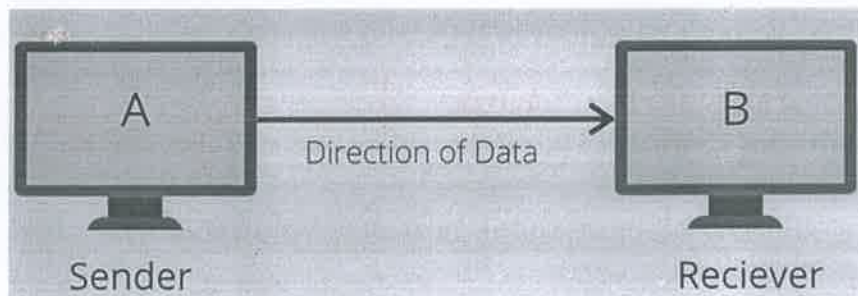
Transducer

2. Noise in the communication system are, **(Find the Odd ones)**

Noise, Modulation, Distortion, Interference, Crosstalk

3. Who is going to change according to whom in any modulation techniques?

characteristic of Carrier will change according to message signal in modulation
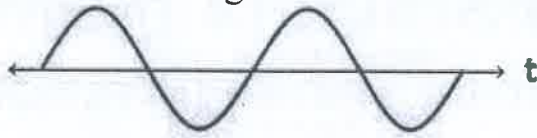
4. Identify the below figure,
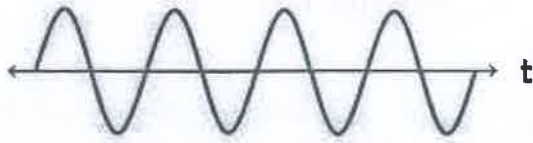

Simplex → one way transmission

5. The other name of Message Signal / Original signal is called as _____?
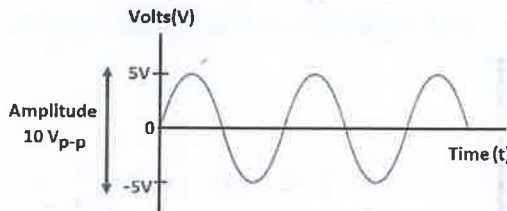
Baseband signal
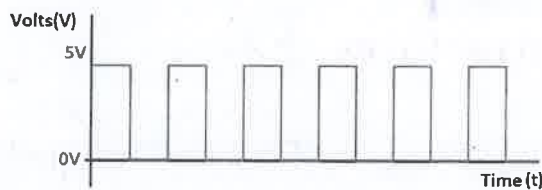
6. Find the below Figure and state what it is

low frequency signal

high frequency signal

analog signal

digital signal

7. What are the need for Modulation

① Reducing Antenna height
② Increase the range of Communication
③ Avoid mixing of signals
④ Improve the quality of Reception

8. Calculate the antenna height for the frequency 250Ghz

$$h = \frac{\lambda}{4} \Rightarrow \lambda = \frac{c}{f} \Rightarrow \frac{c}{f} \times 4 = \frac{3 \times 10^8}{250 \times 10^9 \times 4} = 0.0012 = 1.2 \text{ mm}$$

9. I am going to carry the input message signal from Mumbai to London. Who am I?

Carrier - high frequency signal

10. Find all the odd ones in Analog Modulation techniques

Amplitude, Position, Frequency, Phase, Width