D.N.R COLLEGE OF ENGINEERING & TECHNOLOGY
Department of Electronics and Communication Engineering
Academic Year: 2021- 2022 (Odd Semester)
Innovative Teaching Method

B-Tech, Semester& Branch: III/ I Semester ECE
Title: Digital Communication
Name of the Faculty member: P. Abhigna
Name of the Topic: Quadrature Amplitude Modulation
Name of the Innovative Practice: Animation Video
Date& Duration: 26.06.2021&20 Minutes

Description:

Animation is a method in which pictures are manipulated to appear as moving images. In traditional animation, images are drawn or painted by hand on transparent celluloid sheets to be photographed and exhibited on film. Today, most animations are made with computer- generated imagery (CGI). Computer animation can be very detailed 3D animation, while 2D computer animation can be used for stylistic reasons, low bandwidth or faster real-time renderings.

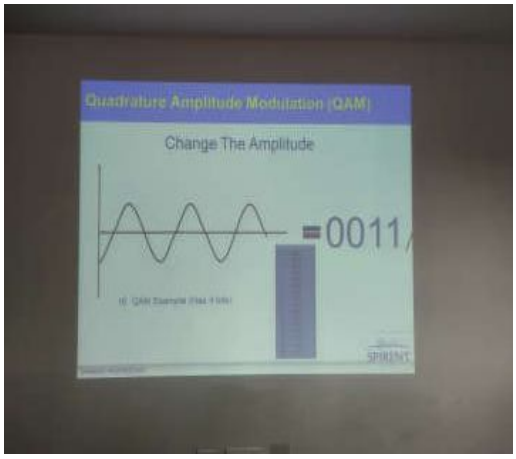
Goals (LearningOutcomes):

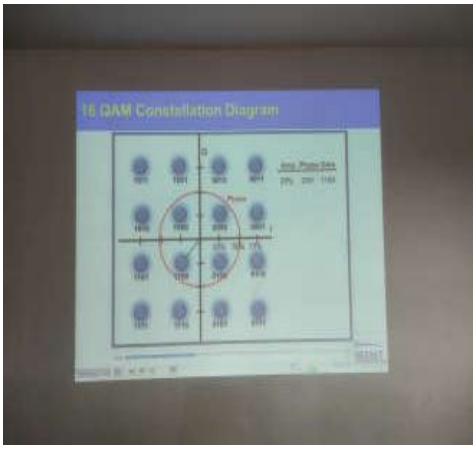
To enable the students to learn the fundamentals of Quadrature Amplitude Modulation system and interpret the modulated and demodulated waveforms.

Use* ofappropriatemethods*:

Justification for choosing the topic using Hardware Demonstration

For the 21st generation students to compete better and to inculcate the learning process in them. Animation enables students to understand the value of reflection and critical judgment in creative work.





Reflective Critique:

Benefits:

Make education enjoyable

Inculcate critical thinking

Analytical thinking

REFERENCES:

1. Digital and Analog Communication Systems - Sam Shanmugam, John Wiley, 2005.
2. Digital Communications – John Proakis, TMH, 1983. Communication Systems Analog & Digital – Singh &
Sapre, TMH, 2004.
3. Modern Analog and Digital Communication – B.P.Lathi, Oxford reprint, 3rd edition, 2004.

D.N.R COLLEGE OF ENGINEERING & TECHNOLOGY
Department of Electronics and Communication Engineering
Academic Year 2021- 2022 (EVEN Semester)
Innovative Teaching Method

B-Tech, Semester& Branch: II/ II Semester ECE
Title: Digital Ic Design
Name of the Faculty member: P.Abhigna
Name of the Topic: Counters
Name of the Innovative Practice: Real Time Applications

Description:

A digital circuit which is used for counting pulses is known counter. Counter is the widest application of flip-flops. It is a group of flip-flops with a clock signal applied. Counters are of two types. Asynchronous and Synchronous counters.

I explained some real world applications which are using counter circuits. I show some videos related to applications of counters, which are the essential part of our day to day life.

In everyday life we are using synchronous counter in all digital circuits which have timing in its. Suppose in the morning you will wake up with the help of alarm and the TV and AC and sports watch and digital watches we are using synchronous counters. These counters find their applications in embedded systems, stop watch, real-time clock and processors. After receiving the clock signal they count the desired sequence in order.

I motivated the students to do a mini project with the help of counters. I gave the electronic components and other materials in the laboratory classes for doing the projects with counter applications. Some of the students successfully designed their mini projects like Automatic Room light controller, Count down applications, Player time counter and Automatic visitor counter.

References:

1. https://nptel.ac.in/content/storage2/nptel_data3/html/mhrd/ict/text/106105185/lec45.pdf
2. https://en.wikipedia.org/wiki/Counter_(digital)
3. https://www.geeksforgeeks.org/counters-in-digital-logic/