NARAYANA ENGINEERING COLLEGE::NELLORE

(AUTONOMOUS)

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Accorded 'A' grade by Govt. of AP, Recognized by UGC 2(f) & 12(B),
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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Report on Expert Lecture on "Band Pass Data Transmission"

The department of Electronics and Communication Engineering has conducted partial deliver by Industrial expert lecture on **"Band Pass Data Transmission"** on behalf of **IETE** which is held from 22.11.2022 to 25.11.2022. All III B.Tech ECE students need to participate in this event.

Industries are looking for graduates who have good roles and responsibilities and have additional skills in their core domain. With the motive of enhancing the students skills, the expert lecture has been organized by The Institution of Electronics and Telecommunication Engineers **(IETE)** of ECE department.

Dr.K.Murali, HoD ECE welcomed the gathering.

Mr. C. Sateesh Kumar Reddy, Convener, introduced the resource person and invited

Dr. Sk. Shafee to discuss on Band Pass Data Transmission.

Resource Person:
Dr. Sk. Shafee
SDE, BSNL
Nellore, Andhra Pradesh


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NARAYANA ENGINEERING COLLEGE
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BAND-PASS DATA TRANSMISSION
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Dr. Sk. Shafee explained the passband transmission, the amplitude, phase or frequency of the carrier signal is regulated to transmit the bits. The incoming data stream is modulated onto a carrier and then transmitted over a band-pass channel.

The types of passband transmission are illustrated as –

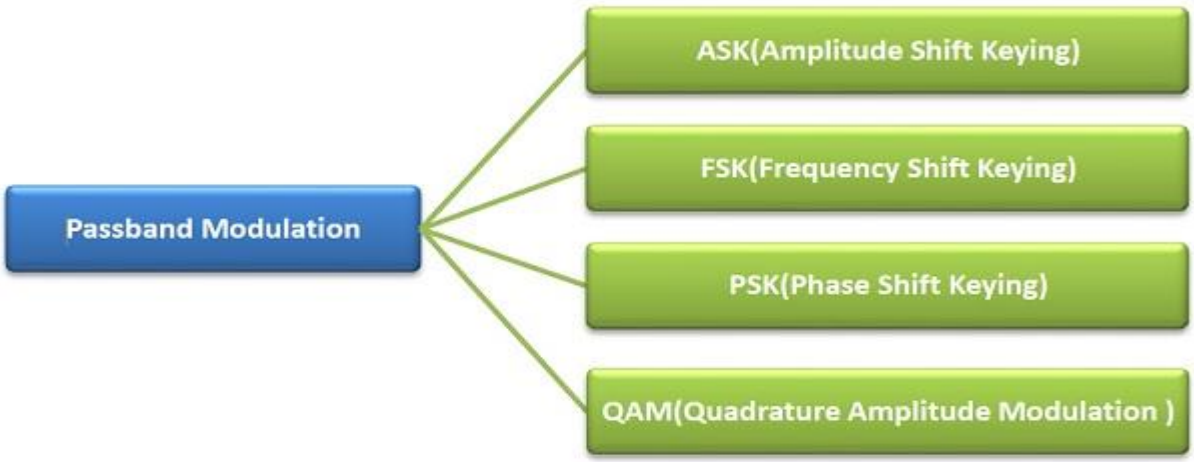

Figure 1: Passband Modulation

In ASK, the amplitude of the signal is varied to represent the signal levels, while frequency and phase remains constant. In order to represent 0 and 1, two different amplitudes are used.

In FSK, the frequency of the signal is modulated to represent the signal levels, while amplitude and phase remains constant. To represent the signal levels 0 and 1, two different frequencies are used.

In PSK, the phase of the carrier signal is modulated to represent the signal levels, while amplitude and frequency remains constant. Binary Phase Shift Keying (BPSK) is the simplest form of PSK where there are two signal elements represented by two different phases. In Quadrature PSK (QPSK), two bits of information are transmitted per symbol by using four different phases.

QAM is a combination of ASK and PSK. Here, both the amplitude and the phase are are varied to transmit more bits per symbol.

Dr. Sk. Shafee addressed the Passband Data Transmission concerns the Transmission of the Digital Data over the real Passband channel and also different categories of digital communication and focus on power, bandwidth.

All the Students of III year B.Tech ECE actively involved in the session where they recollected, related the information and effectively shared their knowledge.

After Completing the Expert lecture on Band Pass Data Transmission session, **Dr. K. Murali, HoD ECE** appreciated the students for their active participation in the event.

Mr. C. Sateesh Kumar Reddy, **Convener** delivered the vote of thanks.