5th ETC

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

SIVARAM VIHAR, GHATAKESWAR HILLS
MOHADA, BERHAMPUR (GM.)

STUDENT'S ATTENDANCE REGISTER

Day \ Time	9:05 – 9:55	9:55 – 10:45	10:45 – 11:35	12:25 – 01:15	
MON	✓				
TUE	✓				
WED		✓			
FRI			✓		
SAT				✓	

Year/ Session	15-09-22 to 22-12-22
Semester & Branch	5th, E&TC
Subject with Code	Analog & Digital Communicatn (TH-3)
Name of the Faculty Member	Purna Chandra Nahak

B.I.E.T.
SYLLABUS COVERAGE

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
UNIT-1 :- Elements of communication systems.			
1.1. communication process - concept of elements of communication system & its block diagram.	16/09/22		
1.2. Source of information & communication Channels.	19/09/22		
1.3. Classification of communication systems (Line & wireless or radio)	20/09/22		12/9/22
1.4. Modulation Process, Need of modulation and classify modulation process.	21/09/22 - 23/09/22		
1.5. Analog & digital signals & its conversion			
1.6. Basic concepts of signals & signals classification (Analog & Digital).	24/09/22		12/9/22

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SYLLABUS COVERAGE

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
1.7. Bandwidth limitation	26/09/22		
UNIT-2 :- Amplitude (Linear) modulation systems.			
2.1. Amplitude modulation & derive the expression for amplitude modulation signal, power relation in AM wave & find modulation index.	27/09/22 28/09/22		29/9/22
2.2. Generation of amplitude modulation (AM) - Linear level AM modulation only.	30/09/22		
2.3. Demodulation of AM waves (Linear diode detector, square law detector & PLL).	12/10/22 14/10/22		
2.4. Explain SSB signal and DSBSC signal.	15/10/22 17/10/22		

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
2.5. Methods of generating & detection SSB-SC signal (Indirect method only)	18/10/22	Surya	
2.6. Methods of generation DSB-SC signal (Ring modulator) and detection of DSB-SC signal (synchronous detection)	19/10/22 21/10/22	Surya Surya	
2.7. Concept of Balanced modulators.	22/10/22	Surya	12/9/22
2.8. Vestigial side band modulation.	25/10/22	Surya	
UNIT:-3 : Angle Modulation System			
3.1. Concept of angle modulation & its types (PM & FM)	26/10/22	Surya	
3.2. Basic principle of frequency modulation & frequency spectrum of FM signal.	28/10/22	Surya	12/9/22

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
3.3. Expression for frequency modulated signal & modulated index & sideband of FM signal.	29/10/22	Iwene	
3.4. Explain phase modulation & difference of (FM & PM)- working principle with block diagram.	31/10/22 – 01/11/22	Iwene Iwene	
3.5. Compare between AM & FM modulation (Advantages & disadvantages)	02/11/22	Iwene	12/11/22
3.6. Methods of FM generation (Indirect (Armstrong) method only) working Principle with block diagram.	04/11/22	Iwene	
3.7. Methods of FM demodulator or detector (Foster-seeley & Ratio detector) working Principle with block diagram.	05/11/22 – 07/11/22	Iwene Iwene	

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
UNIT-4:- AM & FM Transmitter & Receiver			
4.1. Classification of radio receivers 4.2. Define the terms selectivity, sensitivity, fidelity & noise figure.	09/11/22	Iwene	
4.3. AM transmitter - working Principle with block diagram	11/11/22	Iwene	Pradhan 12/11/22
4.4. Concept of frequency conversion, RF amplifier & IF amplifier, Tuning, S/N ratio.	12/11/22	Iwene Iwene	
4.5. Working of seeper heterodyne radio receiver with block diagram.	14/11/22	Iwene Iwene	
4.6. Working of FM transmitter & receiver with block diagram.	15/11/22 16/11/22	Iwene Iwene	Mpathy 12/11/22

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
UNIT-5 :- Analog to Digital conversion & pulse modulation system :-			
5.1. Concept of sampling theorem, nyquist rate & Aliasing.	18/11/22	Suma	
5.2. sampling techniques (instantaneous, natural & flat top)	19/11/22	Suma	
5.3. Analog pulse modulation - Generation & detection of PAM, PWM, & PPM systems with the help of block diagram & comparision of all above.	21/11/22 25/11/22	Suma Suma	Prabhakar 12/9/22
5.4. Concept of quantization of signal & quantization error.	26/11/22	Suma	
5.5. Generation & demodulation of PCM system with block diagram & its applications.	28/11/22 29/11/22	Suma Suma	

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SYLLABUS COVERAGE

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
5.6. Companding in PCM & vocoder.	30/11/22	Purna	
5.7. Time division multiplexing & explain the operation with circuit diagram.	02/12/22	Purna Purna	
5.8. Generation & demodulation of Delta modulation with block diagram.	03/12/22 05/12/22	Purna Purna	
5.9. Generation & demodulation of DPCM with block diagram.	06/12/22	Purna Purna	Upadhya 12/9/22
5.10. Comparision between PCM, DM, ADM & DPCM.	07/12/22	Purna	
UNIT-6 :- Digital Modulation Techniques.			
6.1. Concept of multiplexing (FDM & TDM). (Basic concept Transmitter & receiver) & digital modulation formats.	08/12/22 09/12/22	Purna Purna	Upadhya 12/9/22

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SYLLABUS COVERAGE

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
6.2. Advantages of digital communication system over analog system.	10/12/22	Swens	
6.3. Digital modulation techniques & types.	12/12/22	Swens	
6.4. Generation & detection of binary ASK, FSK, PSK, QPSK, QAM, MSK, GMSK.	13/12/22 14/12/22	Swens Swens	
6.5. working of T1-carrier system.	16/12/22	Swens	12/9/22
6.6. spread spectrum & its applications.			
6.7. working operation of spread spectrum modulation techniques (DS-SS & FH-SS).	17/12/22	Swens	
6.8. Define bit, baud, symbol & channel capacity formula (Shannon theorems).	19/12/22	Swens	

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SYLLABUS COVERAGE

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
69. Application of different modulation schemes.	20/12/22	Pooja	Upadhyay 12/9/22
70. Types of modem & its application.	21/12/22	Pooja	
	Pradyun 12.9.22		Upadhyay 12/9/22
			Seen Thakur 18/11/22