K.D.K. COLLEGE OF ENGINEERING NANDANVAN, NAGPUR

DEPARTMENT OF ELECTRONICS ENGINEERING

Session: 2018-19

Sub: - Communication Electronics **Assignment No-1** **Sem.:- V**

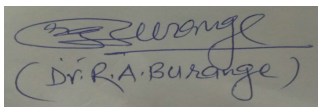
Date of Assignment: - 25/07/2018

Bloom's Taxonomy Levels-1. Remember 2. Understand 3. Apply 4. Analyze 5. Evaluate 6. Create

Question Nos:-1 to 4 based on CO 504.1: *Describe the different blocks in communication system and distinguish different Amplitude modulation schemes with their advantages, disadvantages and applications.*

Q No.	Question	BT Level
Q1	Explain Ring Modulator along with the waveform.	L2
Q2	Draw the block diagram of phase shift method for SSB generation and explain how the carrier and the unwanted sideband are suppressed	L2
Q3	An SSB transmission contains 10KW. This transmission is to be replaced by a standard amplitude modulated signal with the same power content. Determine the power content of the carrier and each of the sidebands when the percentage modulation is 80%.	L3
Q4	Calculate the percentage power saving when carrier and one of the side bands are suppressed in an AM modulated to a depth of I) 75% II)50%	L3

Last Date for Submission: - 30/07/2018



Dr. R. A. Burange

Subject Teacher

K.D.K. COLLEGE OF ENGINEERING NANDANVAN, NAGPUR

DEPARTMENT OF ELECTRONICS ENGINEERING

Session: 2018-19

Sub: - Communication Electronics **Assignment No-2** **Sem.:- V Sem.**

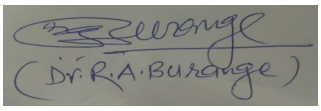
Date of Assignment: - 21/08/2018

Bloom's Taxonomy Levels-1. Remember 2. Understand 3. Apply 4. Analyze 5. Evaluate 6. Create

Question Nos:-1 to 4 based on CO 504.2: *Analyze the generation and detection of FM signal and compare Amplitude and Angle modulation.*

Q No.	Question	BT Level
Q1	Explain the working principle of Armstrong type of frequency modulator with simple diagram.	L2
Q2	Explain the modulation process using Varactor diode in detail.	L2
Q3	A carrier is frequency modulated by a 4 KHz sine wave resulting in an FM signal having a maximum frequency of 107.218 MHz and minimum frequency of 107.196 MHz find. i) Carrier Swing ii) Carrier frequency iii) frequency deviation iv) Modulation Index	L3
Q4	Explain indirect method of FM generation.	L2

Last Date for Submission: - 30/08/2018



Dr.R.A.Burange

Subject Teacher

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Session: 2018-19

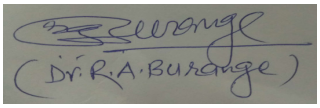
Sub: - Communication Electronics **Assignment No-3** **Sem.:- V**

Date of Assignment: - 03/10/2018

Bloom's Taxonomy Levels-1. Remember 2. Understand 3. Apply 4. Analyze 5. Evaluate 6. Create
Question Nos:-1 to 4 based on CO 504.4: *Identify different type of Noises and Sources of Noise.* Question Nos:-5to 6 based on CO504.6: *Differentiate Multiplexing Techniques and Describe different broadband communication link*

Q No.	Question	BT Level
Q1	Explain in details (i) Thermal Noise (ii) Avalanche Noise	L2
Q2	Derive the Expression for Noise Figure for two stages Amplifier.	L3
Q3	A Receiver connected to an antenna whose resistance is 50Ω has an equivalent noise resistance of 33Ω. Calculate the receiver's noise figure in decibels & its equivalent noise temperature.	L3
Q4	Explain shot noise in details.	L2
Q5	Write short notes on. (Any two) Fiber Optic Cable (ii) Submarine cables (iii) Coaxial Cables (iv) Microwave links	L1
Q6	Explain Frequency Division Multiplexing with proper diagram.	L2
Q7	List the three applications of TDM & FDM each.	L1

Last Date for Submission: - 12/10/2018



Dr.R.A.Burange

Subject Teacher