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G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.



UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.Sc., ELECTRONICS

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	ELECTIVE GENERIC - 3	U23EL3A3	ELECTRONICS COMMUNICATION SYSTEMS

Date &amp; Session: 14.11.2024/AN

Time : 3 hours

Maximum: 75 Marks

Course Outcome	Bloom's K-level	Q. No.	SECTION - A (10 X 1 = 10 Marks) Answer <u>ALL</u> Questions.
CO1	K1	1.	What does AGC stand for? a) Automatic gain control      b) Automatic gear control c) Amplitude gain control      d) Automotive gear centre
CO1	K2	2.	How can the noise be reduced in AM signal? a) Increasing amplitude      b) Increasing wavelength c) Increasing bandwidth      d) Increasing frequency deviation
CO2	K1	3.	The neutral atoms of all isotopes of the same element contain the same number of ____. a) neutrons only      b) electron      c) mass number      d) mass number
CO2	K2	4.	Heat transfer by radiation mainly depends upon. a) its temperature      b) nature of the body c) its surface properties      d) all of the above
CO3	K1	5.	If the radiation resistance of a Hertzian dipole is $100\Omega$ , then the radiation resistance of short dipole is $\_\_\Omega$ . a) 25      b) 50      c) 73      d) 35.6
CO3	K2	6.	When Hertzian dipole is connected to a practical antenna, which of the following field is observed to be absent when a uniform current flow is observed? a) Radiation field      b) Induction field c) Electrostatic field      d) Both radiation and Induction Field
CO4	K1	7.	The transmission of data by dots and dashes is an example of ____. a) Amplitude modulation      b) Frequency modulation c) Continuous wave transmission      d) Discrete signal transmission
CO4	K2	8.	What generates the final carrier frequency? a) Oscillator      b) Modulator      c) Antenna      d) Power source
CO5	K1	9.	Why amplitude modulation is issued for broadcasting? a) It is more immune to noise      b) It has more fidelity c) It avoids receiver complexity      d) It has better selectivity and sensitivity
CO5	K2	10.	An ergodic process is present in communication if many random signals have ____. a) identical time averages      b) identical ensemble averages c) identical time and ensemble averages      d) identical bandwidth

Course Outcome	Bloom's K-level	Q. No.	<b>SECTION - B (5 X 5 = 25 Marks)</b> <b>Answer ALL Questions choosing either (a) or (b)</b>
CO1	K3	11a.	Examine the blocks involved in a Transmitter. <b>(OR)</b>
CO1	K3	11b.	Sketch the AM Wave and represent the same with an equation.
CO2	K3	12a.	Build a short note on basics of Space Waves. <b>(OR)</b>
CO2	K3	12b.	Explain the importance of Radiation and reception.
CO3	K4	13a.	Analyze the significance of Band Width in communication systems. <b>(OR)</b>
CO3	K4	13b.	Categorize the Antenna using their resistance.
CO4	K4	14a.	Discover the benefits of FM Transmitter. <b>(OR)</b>
CO4	K4	14b.	Demonstrate the importance of Digital Signal Processing.
CO5	K5	15a.	Construe the AM Receiver as best receiver. <b>(OR)</b>
CO5	K5	15b.	Assess the concept of Radio detector.

Course Outcome	Bloom's K-level	Q. No.	<b>SECTION - C (5 X 8 = 40 Marks)</b> <b>Answer ALL Questions choosing either (a) or (b)</b>
CO1	K3	16a.	Demonstrate the Frequency Modulation Theory with neat sketch. <b>(OR)</b>
CO1	K3	16b.	Illustrate the Frequency spectrum of AM wave with neat diagram.
CO2	K4	17a.	Paraphrase the fundamentals of Electromagnetic waves with neat diagram. <b>(OR)</b>
CO2	K4	17b.	Write a note on following terms. (i) Sky waves. (ii) Ground Waves.
CO3	K4	18a.	Determine how to the measure the Antenna Resistance with diagram. <b>(OR)</b>
CO3	K4	18b.	Mention the context used in the Beam Width with necessary diagram.
CO4	K5	19a.	Investigate in details on fundamental of Analog speech process with neat diagram. <b>(OR)</b>
CO4	K5	19b.	Assess the performance of CW Transmitter with neat diagram.
CO5	K5	20a.	Briefly explain the Balanced Radio detector circuit with neat sketch. <b>(OR)</b>
CO5	K5	20b.	Summarize the Function of Amplifier with neat diagram.