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



UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., ELECTRONICS

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
VI	PART - III	CORE	U21EL404	LINEAR INTEGRATED CIRCUITS

Date &amp; Session: 09.11.2024 / 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.	The total number of pins in IC741 are? a) 2 b) 4 c) 6 d) 8
CO1	K2	2.	Two inputs of the op amps are named as. a) Inverting and non-inverting b) Positive and Negative c) X and Y d) Logic 1 and Logic 2
CO2	K1	3.	What is the system which has feedback in it? a) Open Loop b) Closed Loop c) Infinite operation d) Finite operation
CO2	K2	4.	Associate the amplifier which is used in precise measurement. a) Audio Amplifier b) Power Amplifier c) Instrumentation Amplifier d) Non-linear Amplifier
CO3	K1	5.	Which filter is used to attenuate low frequency? a) Low pass filter b) High pass filter c) Band pass filter d) Band reject filter
CO3	K2	6.	Select the filter that is used to allow mid frequency and cut high and low frequency. a) Low pass filter b) High pass filter c) Band pass filter d) Band reject filter
CO4	K1	7.	Choose the example for relaxation oscillator. a) Saw tooth Generator b) Square wave Generator c) Triangle wave Generator d) All of these
CO4	K2	8.	Identify the circuit that is used to shape any wave form to square wave. a) Schmitt trigger b) Oscillator c) Rectifier d) Bridge
CO5	K1	9.	Choose the multivibrator that has one stable state. a) Astable multivibrator b) Monostable multivibrator c) Bistable multivibrator d) Unstable multivibrator
CO5	K2	10.	Indicate the IC that is used as voltage-controlled oscillator. a) IC 741 b) IC 555 c) IC 566 d) IC 711

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.	Construct a balanced amplifier using IC 741. <b>(OR)</b> Construct an Unbalanced amplifier using IC 741.
CO1	K3	11b.	
CO2	K3	12a.	Determine the frequency response of Op Amp. <b>(OR)</b> Construct a voltage to current converter using Op Amp.
CO2	K3	12b.	
CO3	K4	13a.	Illustrate the working of High pass filter. <b>(OR)</b> Examine the working of Low pass filter.
CO3	K4	13b.	
CO4	K4	14a.	Give a comment about the concept of Sinusoidal oscillator. <b>(OR)</b> Illustrate the working of Schmitt trigger.
CO4	K4	14b.	
CO5	K5	15a.	Recommend a circuit for astable multivibrator with diagram. <b>(OR)</b> Recommend a circuit for monostable multivibrator with diagram.
CO5	K5	15b.	

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.	Write about the IC 741 with block diagram. <b>(OR)</b> Make use of a level shifter, list its application.
CO1	K3	16b.	
CO2	K4	17a.	Compare open and closed loop configuration in Op Amp. <b>(OR)</b> With diagram, explain differentiator and integrator using Op Amp.
CO2	K4	17b.	
CO3	K4	18a.	Illustrate with a diagram, Sample and Hold systems <b>(OR)</b> Distinguish between Band pass and Band reject filters
CO3	K4	18b.	
CO4	K5	19a.	Examine the operation of Op Amp as square wave generator. <b>(OR)</b> Examine the operation of Op Amp as saw tooth wave generator.
CO4	K5	19b.	
CO5	K5	20a.	Give your opinion on the application of Voltage Controlled Oscillator (IC566) <b>(OR)</b> Recommend some applications of IC 555 with examples.
CO5	K5	20b.	