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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	CORE-5	U23EL303	ELECTRONIC CIRCUITS

Date & 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.	Rectifier converts AC signal into. a) Pulsating DC b) DC signal c) Pulsating A d) pure DC signal
CO1	K2	2.	Ideal Regulated power supplies _____ % voltage regulation. a) 2 b) 7 c) 0 d) 5
CO2	K1	3.	The amplifier will retain the shape of the input signal at the output is called. a) Pulse transformer b) Non Linear Amplifier c) Distortion Amplifier d) Linear Amplifier
CO2	K2	4.	_____ coupling is generally employed in power amplifiers. a) Transformer b) RC c) direct d) Impedance
CO3	K1	5.	Emitter follower is a _____ circuit. a) voltage feedback b) current feedback c) positive feedback d) negative feedback
CO3	K2	6.	The negative feedback amplifier leads to. a) increase in current gain b) increase in voltage gain c) decrease in voltage gain d) decrease in bandwidth
CO4	K1	7.	An oscillator produces _____ oscillations. a) damped b) un damped c) modulated d) overdamped
CO4	K2	8.	In a phase shift oscillator, we use _____ RC sections. a) two b) three c) four d) one
CO5	K1	9.	Mono- stable multi -vibrator generates. a) PWM b) PPM c) PAM d) DM
CO5	K2	10.	Schmitt trigger can be used to. a) Square wave generator b) comparator c) both (a) & (b) d) clamper
Course Outcome	Bloom's K-level	Q. No.	SECTION - B (5 X 5 = 25 Marks) Answer <u>ALL</u> Questions choosing either (a) or (b)
CO1	K3	11a.	Construct a half-wave rectifier with neat diagram and explain its operations with necessary wave forms.
CO1	K3	11b.	(OR) Define the term voltage regulator? Explain with one example regulator?
CO2	K3	12a.	Determine the operating point of a Class A power amplifier.
CO2	K3	12b.	(OR) What is Multistage amplifier? Categorize the coupling used in multistage amplifier.

CO3	K4	13a.	Describe the effect of feedback in gain of amplifiers? (OR)
CO3	K4	13b.	Sketch the principle of feedback amplifiers.
CO4	K4	14a.	Distinguish between Oscillators and Amplifiers. (OR)
CO4	K4	14b.	Illustrate the concept of Colpitt's Oscillator with neat diagram.
CO5	K5	15a.	Evaluate the applications of Mono stable multi vibrator. (OR)
CO5	K5	15b.	Explain Schmitt trigger with neat diagram.

Course Outcome	Bloom's K-level	Q. No.	SECTION - C (5 X 8 = 40 Marks) Answer <u>ALL</u> Questions choosing either (a) or (b)
CO1	K3	16a.	Calculate the value of Ripple factor in a Full wave Rectifier with resistive Load? (OR)
CO1	K3	16b.	Organize the types of filters in detail.
CO2	K4	17a.	Explain transformer coupled amplifiers and analyse their efficiency. (OR)
CO2	K4	17b.	Analyse the working principle of RC coupled amplifier.
CO3	K4	18a.	Write Short notes on (i) Voltage Series feedback (ii) Voltage Shunt feedback. (OR)
CO3	K4	18b.	Explain the principles of negative voltage feedback?
CO4	K5	19a.	Sketch the circuit of phase shift oscillator and explain the concept? (OR)
CO4	K5	19b.	Explain in detail the construction of Hartley Oscillator and evaluate the condition to start the oscillations.
CO5	K5	20a.	Explain astable multivibrator and deduce an expression for its output frequency. (OR)
CO5	K5	20b.	Evaluate clamping circuits for DC offset applications.