Question Paper Code: R18A22EC01

R18

ANURAG Engineering College

(An Autonomous Institution)

II B.Tech II Semester Supplementary Examinations, December-2024

ANALOG ELECTRONIC CIRCUITS

(ELECTRICAL AND ELECTRONIC ENGINEERING)

Time: 3 Hours **Max. Marks: 75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions

		Course Outcome	B.T Level	Marks
1.	Compare the current gains of CE, CB, & CC amplifiers?	CO1	L1	2M
2.	Write advantages of h-Parameters.	CO1	L2	3M
3.	What is Thermal Runaway?	CO2	L1	2M
4.	Discuss the importance of heat sinks?	CO2	L2	3M
5.	Define Clipper Circuit.	CO3	L1	2M
6.	List the applications of voltage comparator?	CO3	L2	3M
7.	Define storage time for transistor.	CO4	L1	2M
8.	Explain how transistor acts as a switch?	CO4	L2	3M
9.	Define Multivibrator?	CO5	L1	2M
10.	List and Explain types of Triggerings?	CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	Derive the expressions for A_I, A_V, R_I, R_O, A_{VS} & A_{IS} by using approximate analysis of the CE amplifiers?	CO1	L3	10M
	OR			
B)	Draw the small signal equivalent of JFET CD amplifier and obtain its voltagegain, input impedance and output impedance.	CO1	L3	10M
12. A)	Demonstrate the principle operation of Class–A transformer coupled power amplifier and derive the efficiency?	CO2	L3	10M
	OR			
B)	With the help of a suitable circuit diagram, show that the maximum conversion efficiency of a class B power amplifier is 78.5%.	CO2	L3	10M
13. A)	Analyze the typical circuit for clipping at two independent levels and draw the input & output waveforms, if the input signal is a sinusoidal voltage?	CO3	L3	10M
	OR			
B)	State and Prove Clamping Circuit theorem. Draw and explain Positive clamping circuit and Negative clamping circuit.	CO3	L3	10M
14. A)	Explain the saturation parameters of transistor and their variation with temperature?	CO4	L3	10M
	OR			
B)	With the help of suitable waveforms of switching times of diode switch derive the expression for reverse recovery time.	CO4	L3	10M
15. A)	Explain the operation of fixed bias Bistable Multivibrator and derive the expression for stable state voltages and currents?	CO5	L3	10M
	OR			
B)	Draw and Explain the working of Astable Multivibrator and explain Design procedure?	CO5	L3	10M