Register Number:……..

KUMARAGURU
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B.E DEGREE EXAMINATIONS: NOV/DEC 2022

(Regulation 2018)

Third Semester

ELECTRICAL AND ELECTRONICS ENGINEERING

U18EEI3203T: Analog Electronics and Linear Integrated Circuits

COURSE OUTCOMES

CO1: Understand the characteristics and applications of various semiconductor devices.
CO2: Gain knowledge about small signal analysis of BJT and FET amplifiers.
CO3: Analyze large signal amplifier and oscillator circuits.
CO4: Design and analyze the linear applications of Op-amp and Familiarize with the concept of IC based voltage regulator and signal conversion circuits
CO5: Apply the knowledge of semiconductor devices to design analog circuits for various applications using simulation software tools and hardware.

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-
PART A (10 x 2 = 20 Marks)
(Answer not more than 40 words)

1.	Classify Field Effect transistor.	CO1	[K_2]
2.	Draw the VI characteristics of Zener diode.	CO1	[K_2]
3.	What is the need for biasing a Transistor?	CO2	[K_2]
4.	Draw the Voltage divider bias circuit for Transistor.	CO2	[K_2]
5.	Classify Large signal amplifiers.	CO3	[K_2]
6.	List the advantages of Negative feedback in amplifier circuit.	CO3	[K_2]
7.	Compare Inverting and Non-inverting Amplifier.	CO4	[K_2]
8.	What is common mode rejection ratio?	CO4	[K_2]
9.	Draw the pin diagram of IC 555.	CO5	[K_2]
10.	List the applications of LM 317 IC.	CO5	[K_2]

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

11.	a)	With neat diagram explain full wave rectifier with necessary wave form.	16	CO1	[K_2]
12.	a)	Draw and explain hybrid model of CE amplifier with necessary Equation.	16	CO2	[K_3]

13.	a)	With neat explain the operation of RC phase shift oscillator with necessary wave form and equations.	16	CO3	[K_2]
14.	a)	Construct op-amplifier based instrumentational amplifier and explain its operation.	16	CO4	[K_2]
15.	a)	Draw the functional block of Astable multivibrator and draw the VI characteristics along with their application.	16	CO5	[K_2]
16.	a)	Explain the principle of operation for JFET and draw the V-I characteristics.	16	CO1	[K_2]

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