



ACE
Engineering College
(with a Difference in Excellence)

An AUTONOMOUS Institution

Question Paper Code:

EE303PC

ACE-R20

Semester Supplementary Examination
II B. Tech- I Semester- SEPTEMBER-2022
ANALOG ELECTRONICS
(Electrical and Electronics Engineering)

Time: 3 Hours

Max. Marks: 70

H. T. No

Answer any 5 Questions out of 8 Questions from the following

Q.No	Question	Marks
1. a)	What is PN junction diode? Explain the working of PN junction under Forward bias and Reverse bias with neat diagram.	8
b)	Discuss the types of clippers in detail with neat sketches.	6
2. a)	Draw the input and output characteristics of a transistor in CB configuration and explain	10
b)	What is meant by operating point (Q). Comment on different regions of operation of a BJT.	4
3. a)	Sketch the drain characteristics of MOSFET for different values of V_{GS} and mark different regions of operation..	10
b)	Compare in detail about CD and CG amplifier	4
4. a)	Explain the principle of CS amplifier with the help of circuit diagram.	8
b)	Explain the working of N-channel E-MOSFET	6
5. a)	Draw the circuit diagram of a direct coupled class-A power amplifier and explain its operation. Calculate the maximum conversion efficiency.	10
b)	Discuss the need for cascading amplifiers	4
6. a)	Explain current series feedback amplifier	8
b)	Comment on general characteristics of feed back amplifier.	6
7. a)	Draw the circuit diagram of Wein bridge oscillator using BJT and derive the expression for frequency of oscillations	10
b)	What are the conditions for oscillations.	4
8. a)	Draw the block schematic of op-amp and explain each block.	10
b)	List the characteristics of an Ideal operational amplifier.	4