

Code No: P21ECT04

HALL TICKET NUMBER

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PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)

II B.TECH I SEMESTER END SUPPLEMENTARY EXAMINATIONS, MARCH/APRIL - 2023
ELECTRONIC CIRCUIT ANALYSIS
(ECE Branch)

Time: 3 hours

Max. Marks: 70

Answer all the questions from each UNIT (5X14=70M)

Q.No.	Questions	Marks	CO	KL
UNIT-I				
1.	a) Why hybrid model is used for the analysis of BJT amplifier at low frequencies? Draw the hybrid model for CE transistor and derive the parameters.	[7M]	1	
	b) State and explain Millers theorem.	[7M]	1	
OR				
2.	a) Compare CB, CE and CC amplifiers in terms of voltage and current gains and input and output impedance.	[7M]	1	
	b) For the three configurations of a BJT, we require three different sets of 'h' parameters justify.	[7M]	1	
UNIT-II				
3.	a) What is Darlington Connection? With diagram, derive the expression for current gain and input resistance of Darlington amplifier.	[7M]	2	
	b) Explain in detail about transformer coupled amplifier.	[7M]	2	
OR				
4.	a) Determine Hybrid -Pie parameters.	[7M]	2	
	b) Determine the hybrid - pie CE short circuit current gain.	[7M]	2	
UNIT-III				
5.	a) Explain the classifications of feedback amplifiers	[7M]	3	
	b) Discuss Colpitts Oscillator and obtain the expression for frequency of oscillation.	[7M]	3	
OR				
6.	a) Discuss the working principle of Wein bridge oscillator and derive the expression for frequency of oscillations.	[7M]	3	
	b) Determine the input and output resistances of Current Series feedback amplifier.	[7M]	3	
UNIT-IV				
7.	a) Discuss with diagram, Transformer coupled Class A Power Amplifier and derive its Maximum efficiency	[7M]	4	
	b) With neat diagram explain Push Pull Class B Power Amplifier and derive its maximum efficiency.	[7M]	4	
OR				
8.	a) What is a power amplifiers and are classify them based on class of operation and also compare them.	[7M]	4	
	b) Derive the efficiency of a class A power amplifier with necessary diagram.	[7M]	4	
UNIT-V				
9.	a) Explain the operation of a single tuned amplifier circuit and its frequency Response.	[7M]	5	



	b)	What is a stagger tuned amplifier? Explain its advantages and disadvantages.	[7M]	5	
OR					
10.	a)	What is meant by Tuned amplifier and briefly explain the various methods of classification of tuned amplifiers.	[7M]	5	
	b)	Draw the circuit of double tuned amplifier and explain its working.	[7M]	5	
