Q.P. Code: 16EC407 **R16**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech II Year II Semester Supplementary Examinations March-2021

ELECTRONIC CIRCUIT ANALYSIS

(Electronics and Communication Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	**a**	Compare the CE, CB and CC transistor amplifier parameters.	**6M**
	b	With neat diagram, derive the CE amplifier parameters using approximate analysis.	**6M**

OR

2	**a**	Obtain the expression for current gain, voltage gain, input impedance and output impedance for Common Emitter Amplifier with Emitter Resistor.	**6M**
	b	Draw the circuit diagram of a single stage RC coupled Amplifier and discuss the steps used for designing it.	**6M**

UNIT-II

3	**a**	Draw the Hybrid-pi model and explain the significance of each and every component in it.	**6M**
	b	Mention the typical values of Hybrid- π parameters.	**6M**

OR

4	**a**	Describe the relationship between low frequency h-parameters and high frequency Parameters.	**8M**
	b	Write about Collector junction capacitance and Emitter junction capacitance of hybrid-pi model.	**4M**

UNIT-III

5		Describe different methods used for coupling multistage amplifiers with their frequency response.	**12M**

OR

6	**a**	Explain the effect of cascading of amplifiers on bandwidth.	**6M**
	b	An amplifier consists of 3 identical stages in cascade; the bandwidth of overall amplifier extends from 20 Hz to 20 kHz. Calculate the bandwidth of individual stage.	**6M**

UNIT-IV

7		Explain the characteristics of negative feedback amplifiers	**12M**

OR

8	**a**	Discuss the working principle of Wein-bridge oscillator and derive the expression for Frequency of oscillations.	**6M**
	b	Explain the concept of stability of Oscillators.	**6M**

UNIT-V

9	**a**	Discuss with diagram, Transformer coupled Class A Power Amplifier and derive its Maximum efficiency.	**6M**
	b	Describe Higher order harmonic distortion by five point method.	**6M**

OR

10	**a**	Explain the effect of cascading single tuned amplifiers on bandwidth.	**6M**
	b	Explain the advantages, disadvantages and applications of Tuned Amplifiers.	**6M**

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