CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–II–Semester End Examinations (Regular) -June- 2025
ELECTRONIC CIRCUIT ANALYSIS
(ECE)

[Time: 3 Hours]   [Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A   (10 Marks)

1. a)	List out different types of coupling used in Multistage amplifiers.	[1M]
b)	Define gain bandwidth product of an amplifier.	[1M]
c)	Write the expression for Feedback gain of a negative feedback amplifier.	[1M]
d)	Compare the Current series and Current shunt feedback amplifiers.	[1M]
e)	What is the condition for "Frequency of oscillation"?	[1M]
f)	Classify different types of oscillators.	[1M]
g)	Define a Q-factor of Tuned amplifier.	[1M]
h)	Write the advantages transformer coupled amplifier.	[1M]
i)	What are the some applications of Multi vibrators?	[1M]
j)	Which amplifier is used in Miller time base generator?	[1M]

PART-B   (50 Marks)

2.	Describe different methods used for coupling multistage amplifiers with their frequency response.	[10M]

OR

3.	Draw the hybrid π equivalent circuit of a transistor in Common Emitter configuration and explain the various parameters in it.	[10M]

4.	Draw and explain the four topologies of feedback amplifiers.	[10M]

OR

5.	Derive the input resistance, output resistance and voltage gain with feedback for Voltage shunt negative feedback amplifier using block diagram.	[10M]

6.	Draw and explain the operation of Hartley oscillator.	[10M]

OR

7.	Derive the expression for frequency of oscillations for RC phase shift Oscillator.	[10M]

8.	With a neat diagram, explain the principle of operation of class B push-pull amplifier and find its efficiency?	[10M]

OR

9.	With circuit diagram, explain the capacitance coupled single tuned amplifier.	[10M]

10.	Explain the operation of Bistable Multivibrator using transistors with neat sketch.	[10M]

OR

11.a)	Discuss operation of miller sweep generator.	[5M]
b)	How to improve the linearity in time base generators?	[5M]

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