Code No.: EC404PC   R20   H.T.No. [ ][ ][8][R][ ][ ][ ][ ]

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
II–B.TECH–II–Semester End Examinations (Supply) - July - 2024
ELECTRONIC CIRCUIT ANALYSIS
(ECE)

[Time: 3 Hours]   [Max. Marks: 70]

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 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   (20 Marks)

1. a) Define distortion in amplifiers.   [2M]
   b) List out different types of coupling used in multistage amplifiers.   [2M]
   c) What are the types of negative feedback?   [2M]
   d) What are the advantages of negative feedback?   [2M]
   e) State Barkhausan criterion for Oscillations.   [2M]
   f) List out the types of oscillators.   [2M]
   g) What are the different types of Tuned Amplifiers?   [2M]
   h) What is Heat sink and explain its advantages?   [2M]
   i) What are the features of time base signals?   [2M]
   j) What are the applications of monostable multivibrator?   [2M]

PART-B   (50 Marks)

2. Explain various methods used for coupling in multistage amplifiers.   [10M]

OR

3. Derive the expressions for higher and lower cut-off frequency of a multistage amplifier.   [10M]

4. Compare voltage series, voltage shunt, current series and current shunt feedback amplifiers with respect to input resistance and output resistance.   [10M]

OR

5. Draw the circuit of a voltage series feedback circuit and derive its input and output resistances.   [10M]

6. Derive the expression for frequency of oscillations of RC-phase shift oscillator.   [10M]

OR

7. In a Hartley oscillator, if L1=0.2mH, L2=0.3mH and C=0.003 µF, calculate the frequency of oscillation.   [10M]

8. Explain the operation of a class B push-pull power amplifier and derive its conversion efficiency and list out its advantages and disadvantages.   [10M]

OR

9. Explain the classification of tuned amplifier.   [10M]

10. Draw and explain the working of Bistable Multivibrator.   [10M]

OR

11. Explain the operation of Transistor Miller time base generator circuit with neat diagram.   [10M]

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