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C16-AEI-302

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BOARD DIPLOMA EXAMINATION, (C-16)
MARCH/APRIL—2021
DAEIE - THIRD SEMESTER EXAMINATION
ELECTRONIC CIRCUITS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. Classify FETs.
2. List any three thyristor family devices.
3. Define AC load line.
4. Define transistor biasing.
5. List the types of couplings used in amplifiers.
6. Draw the block diagram of voltage shunt negative feedback amplifier.
7. State the necessity of heat sink for a power transistor and a power IC device.
8. List the essentials of an oscillator.
9. Mention any three remedies for instability in oscillators.
10. Draw the Miller sweep circuit using transistor.

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PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the working of UJT with its characteristics. 10
12. List the stabilization techniques and explain any one of them. 10
13. Explain the operation of two-stage RC coupled amplifier with circuit diagram. 10
14. Explain the working of push-pull power amplifier with circuit diagram. 10
15. (a) Explain the working of Darlington amplifier circuit. 5
(b) Distinguish between voltage and current time base generators. 5
16. Draw and explain the working of Colpitts oscillator with circuit diagram. 10
17. Draw and explain the working of Wien bridge oscillator with circuit diagram. 10
18. Draw and explain the working of transistorised monostable multivibrator with waveforms. 10

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