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C14–AEI–403

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BOARD DIPLOMA EXAMINATION, (C–14)
MARCH/APRIL—2018
DAEIE—FOURTH 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. Define AC and DC load line.

2. Write the necessity of stabilization in amplifier circuits.

3. What is the need for multistage amplifier?

4. Draw the circuit of a direct coupled amplifier.

5. Write any three advantages of push-pull amplifier.

6. Classify power amplifiers based on frequency.

7. State the condition for an amplifier to work as an oscilator.

8. Clasify oscillator circuits.

9. Define sweep voltage.

10. Define multivibrator and classify them.

PART—B

10×5=50

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

11. Explain the diode and thermistor stabilization techniques. 10

12. Explain the principle of operation of differential amplifier. 10

13. Explain the following negative feedback amplifiers with block diagrams : 10

(a) Voltage series

(b) Voltage shunt

(c) Current series

(d) Current shunt

14. *(a)* Differentiate voltage amplifiers from power amplifiers. 5

(b) Explain the principle of negative feedback in amplifiers. 5

15. Elucidate with a diagram the working of an RC phase-shift oscillator circuit. 3+7

16. Draw and explain the working of bistable multivibrator with waveforms. 3+5+2

17. Explain with a diagram the working of Schmitt trigger circuit with waveforms. 3+7

18. *(a)* Draw the frequency response of RC-coupled amplifier. 5

(b) Explain the working of crystal oscillator circuit. 5

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