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C09–AEI–303

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BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2013

DAEI—THIRD SEMESTER EXAMINATION

ELECTRONIC CIRCUITS

Time : 3 hours] [*Total Marks* : 80

PART—A

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. State the need for proper biasing in amplifier circuits.

2. List the types of MOSFET.

3. List the applications of SCR.

4. Draw the frequency response of RC-coupled amplifier.

5. State the need of cascading of amplifiers.

6. State the condition for an amplifier to work as an oscillator.

7. State the reasons for instability in oscillator circuits.

8. List the applications of power amplifier.

9. Define sweep voltage.

10. Classify multivibrators.

PART—B

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. *(a)* Explain why CE mode is widely used in amplifier circuits. 6

(b) What is a biasing? List the types of biasing circuits. 4

12. *(a)* Draw the characteristics of UJT. 5

(b) Draw the drain characteristics of JFET. 5

13. *(a)* Classify the amplifiers based on frequency, period of conduction and coupling. 6

(b) Draw the frequency response of transformer-coupled amplifier. 4

14. *(a)* Explain the principle of operation of two-stage RC-coupled amplifier with circuit diagram. 5

(b) Draw and explain the circuit of push-pull power amplifier. 5

15. *(a)* Draw the circuit of Darlington amplifier and explain the operation. 6

(b) Distinguish between voltage amplifiers and power amplifiers. 4

16. *(a)* Explain the working of RC-phase shift oscillator with circuit diagram. 6

(b) List the applications of oscillator. 4

17. *(a)* Explain the working of Hartley oscillator with circuit diagram. 5

(b) Draw and explain Bootstrap sweep circuit. 5

18. Draw and explain Schmitt trigger circuit with waveforms. 10

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