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C14–EE–305

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BOARD DIPLOMA EXAMINATION, (C–14)

OCT/NOV—2017

DEEE—THIRD SEMESTER EXAMINATION

ELECTRONICS—I

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. List the types of resistors based on composition.

2. Define capacitance.

3. State the electrical characteristics of semiconductors.

4. List the essential blocks of DC power supply.

5. Define ripple factor.

6. What is the principle of solar cell?

7. Draw characteristics of UJT.

8. What is DC load line?

9. Define stabilization factor.

10. State the necessity of coupling.

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. *(a)* List the types of transformers.

(b) Explain the losses in transformers. 4+6=10

12. Explain the operation of Zener diode with characteristics.

13. Explain the operation of center-tapped full-wave rectifier with waveforms.

14. Explain the construction of working of SCR.

15. Explain the working principle of *(a)* LED and *(b)* photo-transistor. 5+5=10

16. Explain the potential divider biasing method with diagram.

17. Explain the function of RC coupled amplifier with circuit.

18. Explain the terms *(a)* frequency response characteristics and *(b)* bandwidth.

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