* 4247 *

C14–EE–305

4247

BOARD DIPLOMA EXAMINATION, (C–14)

MARCH/APRIL—2018

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. Mention the specifications of resistor.

2. Write the losses in transformers.

3. Differentiate between intrinsic and extrinsic semiconductors.

4. Define regulation.

5. What is the need of filter?

6. Draw *V-I* characteristics of SCR.

7. What is the principle of LED?

8. Define operating point.

9. What is faithful amplification?

10. Define gain and bandwidth.

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)* Explain the factors affecting the capacitance.

(b) What are the types of capacitors? 5+5

12. Explain the working of *P-N* junction diode in forward and reverse bias with characteristics.

13. Explain the working of bridge rectifier using C filter with circuit diagram.

14. Explain the construction and working of UJT with characteristics.

15. Explain the operation of *(a)* LCD and *(b)* phototransistor.

16. Explain the collector to base bias method with diagram.

17. Explain the working of transformer coupled CE amplifier with a neat circuit.

18. *(a)* Explain the necessity of cascading in amplifiers.

(b) Draw the frequency-response curve of *R-C* coupled amplifier and indicate lower and upper cut-off frequencies.

★ ★ ★