C14-EE–305

4247

BOARD DIPLOMA EXAMINATION, (C-14)

JUNE—2019

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 resistors.

2. List the factors affecting the value of Capacitance of a capacitor.

3. Distinguish between intrinsic and extrinsic semiconductors.

4. Draw the Half-Wave rectifier circuit.

5. State the function of voltage regulated power supply.

6. Draw the symbol and characteristics of photodiode.

7. List the applications of UJT.

8. List the different Biasing methods of transistor.

9. Draw the transistor amplifier circuit.

10. Classify amplifiers on the basis of frequency.

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. *(a)* List the types of resistors based on function and composition.

(b) Define Self inductance, Mutual inductance and Coefficient of coupling. (4+6)

12. Explain the working of P-N junction diode in forward Bias and in reverse Bias.

13. Draw the circuit of centre tapped Full wave rectifier and explain it's working.

14. *(a)* Explain the construction of UJT with a neat sketch.

(b) List the applications of FET. (7+3)

15. Explain the working of SCR and draw it's V-I characteristics.

16. Draw the circuit of collector to base bias circuit and explain it's operation.

17. Draw the cricuit of R-C coupled CE amplifier and explain it's working.

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

(b) Classify amplifiers based on types of load. (6+4)

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