C09–EE–**306**

3244

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2016

DEEE—THIRD SEMESTER EXAMINATION

ELECTRONICS ENGINEERING

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

PART—A   3×10=30

Instructions : (1) Answer **all** questions.

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

(3) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define rectifier efficiency and ripple factor.

2. Explain how a Zener diode acts as voltage regulator.

3. Write the applications of photodiode.

4. Briefly explain the working principle of UJT.

5. Write the applications of opto-coupler.

6. Define stability factor.

7. Write the need for multistage amplifier.

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8. Draw a circuit diagram of current series feedback.

9. Classify oscillators based on frequency.

10. Draw the pinout diagram of a 555 timer IC.

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 working of FW rectifier centre tap transformer using LC filter.   7

(b) Draw the circuit of HW rectifier with   filter.   3

12. *(a)* Explain the construction and working principle of LED.   7

(b) Write the applications of LCD.   3

13. *(a)* Explain DC load line in transistor biasing.

(b) Explain how transistor works as an amplifier.

14. Draw and explain the operation of a two-stage transformer coupled amplifier.

15. Explain the working principle of class A power amplifier with diagram.

16. Briefly explain the uses of OP-Amp as an inverter and summing amplifier.

17. Draw and explain the working of a crystal oscillator.

18. Sketch CRT and describe the functions of different parts of CRT.

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