3244

BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2013

DEEE—THIRD SEMESTER EXAMINATION

ELECTRONICS ENGINEERING

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

PART—A

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

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

1. Define the terms ripple factor and rectification efficiency.

2. List different types of filter circuits used in power supplies.

3. Define the term regulation and list two applications of UJT.

4. Draw the VI characteristics of photodiode.

5. List any four applications of optocoupler.

6. Define stability factor and explain about the need of stabilization.

7. Explain the difference between voltage amplifier and power amplifier.

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8. Explain the advantages of negative feedback in amplifiers.

9. List the applications of oscillators.

10. Classify different types of timer circuits.

PART—B

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

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

11. *(a)* Explain the working of bridge rectifier with neat circuit diagram. 6

(b) What are the advantages of bridge rectifier over centre-tap rectifier? 4

12. *(a)* Explain the working of UJT with neat circuit diagram. 6

(b) List any four applications of LED. 4

13. *(a)* Explain about collector-to-base bias circuits. 6

(b) Explain about thermal runaway. 4

14. *(a)* Explain how a transistor works as an amplifier. 4

(b) Explain the working of transformer-coupled amplifier with neat circuit diagram. 6

15. *(a)* Explain the working of complimentary symmetry push-pull power amplifier with neat circuit diagram. 6

(b) Explain the advantages of cascading amplifier. 4

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16. Explain how the OPAMP works as *(a)* summer, *(b)* differentiator and *(c)* integrator. 4+3+3

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

(b) List the advantages of crystal oscillator. 4

18. *(a)* Explain the working of dual trace CRO. 6

(b) List any four applications of CRO. 4

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