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C09–EE–306

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BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2018

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

1. Draw the circuit of HW rectifier with filter.

2. Write the advantages of bridge-type FW rectifier.

3. State the working principle of JFET.

4. Write the applications of LED.

5. Write the applications of photodiode.

6. Define stability factor.

7. Classify amplifiers based on frequency.

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8. Define feedback factor.

9. Classify oscillators based on frequency.

10. State the need for an industrial timer.

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. Explain bridge rectifier using filter with waveforms.

12. *(a)* Explain the construction and working of solar cell. 7

(b) Write the applications of solar cell. 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 *R-C* coupled amplifier.

15. Briefly explain the use of op-amp as an inverter and summing amplifier.

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

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

18. Draw and explain the block diagram of a function generator.

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