C09–EE–**306**

3244

BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2017

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. Draw the circuit diagram of a full-wave (center tap) rectifier.

2. Define regulation.

3. What is the need for a filter? Draw the circuit symbols of *N*-channel JFET.

4. List any three differences between BJT and JFET.

5. List the applications of photodiode.

6. Explain the concept of DC load line.

7. Define the terms frequency response and bandwidth.

8. List the ideal characteristics of OPAMP.

9. Give the condition for sustained oscillations.

10. Give the front panel controls of CRO.

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PART—B 10×5=50

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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 the working of a half-wave rectifier with capacitor filter circuits.

12. Explain the construction and working principle of LCD and give applications.

13. Explain the operation of transistor as an amplifier.

14. Draw the practical CE amplifier and explain the function of each component.

15. Draw and explain the working of transformer coupled amplifier.

16. Draw and explain the operation of differential amplifier.

17. Draw and explain the working principle of Hartley oscillator.

18. Draw and explain the working principle of a dual-trace CRO.

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