C09-EE-306

3244

BOARD DIPLOMA EXAMINATION, (C-09)

OCT / NOV-2015

DEEE - THIRD SEMESTER EXAMINATION

ELECTRONICS ENGINEERING

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

PART - A 3 X 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. Write the advantages of bridge-type FW rectifier.

2. Draw the regulation characteristics of a Zener diode.

3. Write the applications of JFET.

4. Write the applications of opto-coupler.

5. Write the applications of photo-transistor.

6. Define stability factor.

7. Draw a circuit diagram of current series feedback.

8. Classify amplifiers based on frequency.

9. Draw the circuit of RC phase shift oscillator.

10. What is meant by sensitivity in a CRO?

PART - B

10 X 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 a FW centre-tapped rectifier using L filter with waveforms.

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

12. (a) Explain the construction and working principle of UJT with a neat sketch.

(b) Write the applications of LED.

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

(b) Write the causes of instability of biasing in transistor amplifier.

14. Briefly explain the use of Op-Amp as an Inverter and Summing Amplifier.

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

16. Explain the working principle of complementary push-pull power amplifier.

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

18. Draw and explain the internal block diagram of 555 timer.

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