



C09-EC-402

**3468**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**OCT/NOV—2015**  
**DECE—FOURTH SEMESTER EXAMINATION**  
**ELECTRONIC CIRCUITS—II**

Time : 3 hours ]

[ Total Marks : 80

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**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. Distinguish between voltage and power amplifiers.
2. What is a class B power amplifier?
3. What is a class C power amplifier?
4. Classify oscillators based on fundamental mechanism.
5. Define Barkhausen criterion in oscillators.
6. List the applications of clampers.
7. How does a transistor work as a switch?

- \* 8. What is meant by an opto-coupler?
- 9. Mention any three applications of phototransistor.
- 10. What is the working principle of photoconductive cell?

**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) What is heat sink? Write its necessity.  
(b) List various types of heat sinks and their mounting methods.
- 12. Explain the effect of negative feedback on gain, bandwidth, input and output impedances of an amplifier.
- 13. (a) List the advantages of crystal oscillator.  
(b) Draw the equivalent circuit of crystal and explain.
- 14. Draw and explain the working of Weinbridge oscillator.
- 15. Draw and explain the working of transistor astable multivibrator with waveforms.
- 16. (a) Define sweep voltage and state its purpose.  
(b) Explain bootstrap sweep circuit.
- \* 17. Draw and explain the block diagram of PLL (LM 565).
- 18. Explain the operation of monostable multivibrator using op-amp with a neat circuit diagram.

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