



C09-EC-402

**3468**

**BOARD DIPLOMA EXAMINATION, (C-09)**  
**OCT/NOV—2017**  
**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. List any three IC numbers of power amplifiers.
2. Distinguish between voltage and power amplifiers.
3. Define positive feedback and negative feedback.
4. State the requisites of an oscillators.
5. Classify oscillators based on fundamental mechanism.
6. A transistor works as a switch in CE mode. Justify.
7. List the applications of clampers.

- \* 8. What is meant by an optocoupler?
- 9. Draw the circuit of monostable multivibrator using Op-Amp.
- 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. Explain the working of class C tubed power amplifier with the help of circuit diagram.
- 12. Draw and explain the operation of class A amplifier with transformer load at collector and derive an expression for its efficiency.
- 13. Draw and explain working of Hartley oscillator circuit.
- 14. (a) List the demerits of R-C oscillators.  
(b) Explain the working of transistor crystal oscillator with a neat circuit diagram.
- 15. Draw and explain the working of Schmitt trigger circuit.
- 16. (a) Define sweep voltage and state its purpose.  
(b) Distinguish between voltage and current time base generators and list their applications.
- \* 17. Explain the working of a phototransistor with its characteristics.
- 18. (a) Draw and explain the block diagram of PLL.  
(b) Explain frequency multiplier using PLL.

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