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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

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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