



C14-AEI-403

4415

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—2017
DAEIE—FOURTH SEMESTER EXAMINATION
ELECTRONIC CIRCUITS

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. State the need for proper biasing in amplifier circuits.
2. List the stabilization techniques.
3. List the types of couplings in small-signal amplifiers.
4. Draw the frequency response of transformer-coupled amplifier.
5. Classify negative feedback amplifiers.
6. List any three advantages of push-pull amplifier.
7. State the condition for an amplifier to work as an oscillator.
8. List any three applications of oscillators.

- * 9. Distinguish between voltage and current timebase generators.
10. Draw astable multivibrator.

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 basic CE amplifier with a circuit diagram and necessary waveforms.
12. Explain the principle of operation of two-stage R-C coupled amplifier with a circuit diagram.
13. Explain voltage-series and current-shunt negative feedback amplifiers. 5+5
14. (a) State the necessity of heat sink for a power transistor and power IC devices.
- (b) Classify the power amplifiers on the basis of frequency, period of conduction and configuration.
15. Explain the working of R-C phase-shift oscillator.
16. (a) Explain the emitter follower circuit. 5
- (b) Explain the working of Colpitt oscillator with the expression of frequency of oscillation. 5
- * 17. Explain the operation of Miller sweep circuit using transistor.
18. Explain the working of monostable multivibrator with waveforms.
