



C14-AEI-403

4415

BOARD DIPLOMA EXAMINATION, (C-14)
SEPTEMBER/OCTOBER - 2020
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. Classify the amplifiers based on frequency.

4. State the advantages of emitter follower.

* 5. List any three comparisons between positive and negative feedback.

6. State the necessity of heat sink for power transistor.

7. State the condition for an amplifier to work as an oscillator.

- * 8. State the remedies for instability in oscillator circuits.
9. Define sweep voltage.
10. State the principle of transistor working as a switch in CE mode.

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 necessary waveforms.
12. Explain the principle of operation of two-stage RC coupled amplifier and draw its frequency response.
13. Explain the block diagram arrangements of voltage shunt and current series feedback amplifiers with diagrams.
14. Explain the circuit of push-pull power amplifier.
15. Explain the working of RC phase-shift oscillator and state the conditions of sustained oscillations.
16. (a) Explain the principle of direct-coupled amplifier. 5
- (b) Draw the circuit diagram of Colpitt's oscillator. 5
17. Explain the working of bootstrap sweep circuit using transistor with diagram.
- * 18. Explain the working of transistor monostable multivibrator with waveforms.
