C14-AEI-403

4415

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2018

DAEIE—FOURTH SEMESTER EXAMINATION

ELECTRONIC CIRCUITS

Time : 3 Hours] [*Total Marks* : 80

PART—A 3×10=30

Instruction : (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. What are the types of biasing circuits?

2. Which configuration is widely used in amplifier circuits and why?

3. Classify amplifiers based on period of conduction and coupling.

4. Draw the frequency response of RC coupled amplifier.

5. List any three applications of power amplifiers.

6. Classify negative feedback amplifiers.

7. What are the advantages of Crystal oscillators?

8. Mention the requisites of an oscillator.

9. State the principle of Bootstrap sweep circuit.

10. State the fundamental considerations of sweep waveform.

PART—B 10×5=50

Instruction **:** (1) Answer any **four** 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 potential divider method of biasing with a circuit diagram. 10

12. Explain the principle of operation of two stage transformer coupled amplifier with circuit diagram. 7+3

13. Explain the different types of heat sinks and state the necessity of heat sink for a power transistor. 4+6

14. Classify power amplifier circuits on the basis of frequency, period of conduction and configurations. 10

15. Explain the working of Wien bridge oscillator with circuit diagram. 3+7

16. Sketch and explain the working of a transistorized astable multivibrator with waveforms. 3+5+2

17. Draw and explain Miller's Sweep circuit using transistor. 3+7

18. *(a)* Explain the Emitter follower. 5

(b) State five reasons for instability in oscillators. 5

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