



C09-AEI-303

3213

BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2014
DAEI—THIRD 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. List various bias stabilization techniques.
2. Draw the *V-I* characteristics of SCR.
3. Draw the circuit symbols of CMOSFET, UJT, SCR.
4. Give the classification of amplifiers based on frequency of operation.
5. Draw the frequency response of *R-C* coupled amplifier.
6. List the applications of power amplifiers.
7. List the applications of oscillators.
8. State the reasons for instability in oscillator circuits.
9. Give the classification of multivibrators.
10. Draw the transistor bistable multivibrator circuit.

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PART—B

5×10=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) Explain the basic amplifier concept of BJT in CB mode. 5
(b) Explain the potential divider method of biasing. 5
- 12.** Explain the construction and working of UJT. 10
- 13.** (a) Explain the working of two-stage R-C coupled amplifier circuit. 5
(b) Explain the principle of operation of differential amplifier. 5
- 14.** (a) Explain the principle of negative feedback in amplifiers. 5
(b) List different IC numbers for power amplifiers. 5
- 15.** (a) Explain the working of Colpitts oscillator. 5
(b) Explain the working of Hartley oscillator. 5
- 16.** Explain the working of transistor astable multivibrator with waveforms. 10
- 17.** (a) Draw and explain the frequency response of transformer coupled amplifier. 5
(b) Compare negative and positive feedbacks. 5
- 18.** (a) Explain the working of tuned collector oscillator. 5
(b) Distinguish between voltage and current sweep circuits. 5

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