



TED (10) – 3058

(REVISION — 2010)

Reg. No.

Signature

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2018**

ELECTRONIC CIRCUITS

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. What is meant by bandwidth of an amplifier ?
2. Write any two applications of tuned amplifier.
3. Define collector efficiency of a power amplifier.
4. State Barkhausen criterion for oscillation.
5. State the conditions for proper differentiation.

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Briefly explain the need for stabilization of operating point.
2. Describe direct coupled amplifier and plot its frequency response.
3. Explain the operation of single ended power amplifier.
4. Explain voltage series feedback with block diagram.
5. Explain the working of Hartley oscillator.
6. Explain the working of Bistable multivibrator.
7. Explain how RC circuit can be used as an integrator.

(5 × 6 = 30)



PART — C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT — I

- III (a) Draw the circuit of a single stage CE amplifier and explain functions of each component. 9
- (b) Write the features and applications of Emitter follower. 6

OR

- IV (a) Plot and explain the frequency response of RC coupled amplifier. 9
- (b) Explain AC and DC load lines. 6

UNIT — II

- V (a) Explain the working of class B pushpull amplifier with a neat circuit diagram. 9
- (b) Write the importance of Impedance matching in power amplifier. 6

OR

- VI (a) Explain the different types of power amplifiers based on period of conduction. 8
- (b) Compare Voltage and Power amplifier. 5
- (c) Write any two applications of power amplifier. 2

UNIT — III

- VII (a) With a neat circuit diagram, explain the working of wein bridge oscillator. 8
- (b) Compare positive and negative feedback in amplifiers. 7

OR

- VIII (a) Explain how negative feedback affects input impedance, output impedance, gain stability and distortion. 8
- (b) Explain the working of RC phase shift oscillator with a neat diagram. 7

UNIT — IV

- IX (a) Explain the working of JFET with a neat diagram. 7
- (b) Explain the operation of Astable multivibrator with wave forms. 8

OR

- X (a) With a neat circuit diagram explain the operation of Mono stable multivibrator. 8
- (b) Explain the working of schmitt trigger with wave forms. 7
