



TED (10) 3058  
(Revision-2010)

N19-05071

Reg.No.....  
Signature.....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE OCTOBER/NOVEMBER-2019

**ELECTRONIC CIRCUITS**

[Maximum marks: 100]

**PART - A**

[Maximum marks: 10]

(Time: 3 Hours)

(Answer all questions in one or two sentences, Each question carries 2 marks)

- I. (1) State the term "frequency response".
- (2) Show the relation between resonance frequency, "Q" and band width.
- (3) State Barkhausen criterion for oscillation.
- (4) Give two application of mono stable multivibrator.
- (5) Give two characteristic of Emitter Follower.

(5 x 2 = 10)

**PART - B**

[Maximum marks: 30]

(Answer any five of the following questions, Each question carries six marks)

- II. (1) Explain the working of potential divider biasing circuit.
- (2) Identify the need of multistage amplifier.
- (3) Distinguish between the voltage amplifier and power amplifier.
- (4) State the importance of heat sinks and heat dissipation in power amplifiers.
- (5) Derive the expression for gain of negative feedback Amplifier.
- (6) Explain the operation of crystal oscillator.
- (7) Explain the working of RC differentiating circuit.

(5 x 6=30)

**PART - C**

[Maximum marks: 60]

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

**UNIT - I**

- III. (a) With the help of circuit explain the working of RC coupled Amplifier. (8)
- (b) Explain DC Load line. (7)

**OR**

- IV. (a) With diagram explain the working of transformer coupled amplifier. (9)
- (b) Explain the need for stabilization of operating point. (6)

**UNIT-II**

- V. (a) Explain the different between series and parallel resonance circuit. (6)
- (b) Explain the operation of class B push pull power amplifier using output transformer. (9)

**OR**

- VI. (a) Explain with circuit the operation and frequency response of single tuned amplifier. (8)
- (b) Explain the operation of a single ended power amplifier circuits. (7)

**UNIT-III**

- VII. (a) Describe the working of RC phase shift oscillator. (8)
- (b) Explain the working of Hartley oscillator. (7)

**OR**

- VIII. (a) Draw the four types of negative feedback in amplifiers. (8)
- (b) With diagram explain the working of colpitt's oscillator. (7)

**UNIT-IV**

- IX. (a) Describe the operation of Schmitt trigger circuit. (7)
- (b) Explain the working of N channel JFET with figure. (8)

**OR**

- X. (a) Explain the construction of Depletion type N channel MOSFET. (8)
- (b) Explain the operation of astable multivibrator using transistor. (7)