

TED (10) – 3063

(REVISION — 2010)

Reg. No.

Signature

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

PRINCIPLES OF 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. Define current gain of CE amplifier.
2. Define the term resonant frequency.
3. Define heat sink.
4. What is feedback ?
5. Name types of multivibrators.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain operating point.
2. Difference between voltage amplifiers and Power amplifiers.
3. State principle of transistor amplifier in CE configuration.
4. Explain parallel resonant circuit.
5. Write a note on types of negative feedback in amplifiers.
6. Compare BJT and JFET.
7. Explain crystal oscillators.

(5×6 = 30)

PART — C
(Maximum marks : 60)

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

UNIT — I

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|-----|--|---|
| III | (a) Explain Fixed bias with Circuit diagram. | 5 |
| | (b) Explain Collector to base bias with circuit diagram. | 5 |
| | (c) Explain voltage divider bias with circuit diagram. | 5 |

OR

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| IV | (a) Explain direct coupled amplifier with circuit diagram. | 9 |
| | (b) Draw and explain Frequency Response of direct coupled amplifier. | 6 |

UNIT — II

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| V | Explain Class B Pushpull amplifier with circuit diagram. | 15 |
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OR

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| VI | (a) Explain Single tuned amplifiers. | 9 |
| | (b) Illustrate importance of impedance matching in power amplifiers. | 6 |

UNIT — III

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| VII | Briefly explain effect of negative feedback on amplifier performance. | 15 |
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OR

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| VIII | (a) Explain Weinbridge oscillator with circuit diagram. | 9 |
| | (b) Explain Barkhausen criteria. | 6 |

UNIT — IV

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| IX | (a) Explain astable multivibrator with circuit diagram. | 8 |
| | (b) Neatly draw waveforms of astable multivibrator. Also give explanation. | 7 |

OR

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| X | (a) Explain differentiator with circuit diagram and waveforms. | 8 |
| | (b) Explain integrator with circuit diagram and waveforms. | 7 |
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