

TED (10)–3001

Reg. No.

(REVISION—2010)

Signature

SECOND SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—OCTOBER, 2013

BASIC ELECTRONICS

(Common for EL, EC, EP, EA, TC, AE, BM, MD, CT, CM and IF)

[Time : 3 hours

(Maximum marks : 100)

PART—A

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. List two specifications of resistors.
2. Draw the symbol of tunnel diode.
3. Write two applications of PN junction diode.
4. What is I_{ceo} ?
5. Write the relationship between α and β .

(5×2=10)

PART—B

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

1. Explain the constructional details of electrolytic capacitor.
2. A resistor has a colour band sequence green, blue, orange and gold. Find the value for resistor.
3. Draw the circuit diagram of zener voltage regulator.
4. Calculate the average value of current for half wave rectifier.
5. Explain with diagram the working of positive clipper.
6. With diagram explain the constructional details of NPN transistor.
7. Distinguish between drift and diffusion current.

(5×6=30)

PART—C

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

UNIT—I

- III (a) Explain with diagram carbon composition resistors. 8
(b) Explain different types of transformer. 7

OR

[8]

[P.T.O.]

		Marks
IV	(a) Describe the working and uses of different variable capacitor.	10
	(b) Write short notes on AFC and RFC.	5

UNIT—II

V	(a) Explain with suitable diagram behaviour of PN junction under forward bias condition.	10
	(b) Distinguish between intrinsic and extrinsic semiconductor.	5

OR

VI	(a) Explain the formation of PN junction and depletion region.	10
	(b) Explain the working of varactor diode.	5

UNIT—III

VII	(a) With suitable diagrams explain the working of full wave bridge rectifier.	10
	(b) Draw the circuit diagram of positive and negative clamper.	5

OR

VIII	(a) Explain the working of voltage tripler circuit with suitable diagram.	8
	(b) Explain the working of shunt capacitor filter.	7

UNIT—IV

IX	(a) With circuit diagram explain the output characteristics of CB configuration.	10
	(b) Draw the symbol and equivalent circuit of UJT.	5

OR

X	(a) Describe how transistor as a switch.	7
	(b) Compare the different transistor configuration.	8

MADIN POLYTECHNIC College