

SECOND SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—OCTOBER, 2014

BASIC ELECTRONICS

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

[Time : 3 hours

(Maximum marks : 100)

PART—A

(Maximum marks : 10)

Marks

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

1. Name two uses of capacitor.
2. Draw the symbol of varactor diode.
3. What is rectification efficiency ?
4. State the current relation in transistor.
5. What is negative clipper ?

(5×2=10)

PART—B

(Maximum marks : 30)

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

1. Explain with example the colour coding of resistor.
2. Describe the constructional details and uses of ceramic capacitor.
3. Sketch the energy band diagram of conductors, insulators and semiconductors.
4. Explain the working of tunnel diode and draw its symbol.
5. Calculate the rms value of current for full wave rectifier.
6. Describe the working of voltage doubler circuit.
7. Derive an equation relating α and β .

(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) Explain the different variable resistor. 10
(b) Write short notes on trimmers and inductors. 5

OR

	Marks
IV (a) Explain working principle of transformer.	5
(b) Briefly explain about different types of fixed resistors.	10
UNIT—II	
V (a) With circuit diagram explain VI characteristics of junction diode.	10
(b) Write notes on Avalanche break down.	5
OR	
VI (a) Explain the working and VI characteristics of zener diode.	10
(b) List the application of tunnel and varactor diode.	5
UNIT—III	
VII (a) With suitable diagram explain centre tapped full wave rectifier.	10
(b) Explain the working of series inductor filter.	5
OR	
VIII (a) Explain the working of combination biased clipper.	8
(b) Compare half wave and bridge rectifier.	7
UNIT—IV	
IX (a) Explain the constructional details of PNP transistor with suitable diagram.	7
(b) Draw the constructional details, symbol, VI characteristics and equivalent circuit of UJT.	8
OR	
X (a) With circuit diagram explain the output characteristics of CE configuration.	12
(b) List the application of transistor.	3