

24-12-2019

Roll No.

Total Pages : 2

BT-1/D-19

31022

BASICS OF ELECTRONICS ENGINEERING

Paper-ECE-101N

Opt. (II)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting atleast *one* question from each unit. All questions carry equal marks.

UNIT-I

1. (a) Draw the symbols of passive electronic components. Explain how they are measured and what is their role in electronic circuits? (8)
(b) What do you mean by Zener diode? How it acts as a voltage regulator? (7)
2. Define Rectifier. How many types of rectifiers are there? Explain each in detail. (15)

UNIT-II

3. (a) Why common emitter amplifier is commonly used? With the help of necessary diagrams explain its amplifying action and V-I characteristics. (8)
(b) Explain the oscillator operation in detail. (7)
4. Differentiate between negative and positive feedback. Write the advantages of using negative feedback in amplifiers. (15)

UNIT-III

5. Derive the output equations of the inverting and non-inverting op-amp circuits. Explain their working operation as an adder and subtraction circuits. (15)
6. With the help of circuit diagrams explain the applications of op-amp as a differentiator and integrator. (15)

UNIT-IV

7. Define C-MOSFET. Explain its working principle in detail. (15)
8. Write short notes on each of the following :
 - (a) Diac. (3)
 - (b) Triac. (4)
 - (c) UJT. (4)
 - (d) SCR. (4)

