

Roll No.

Total No. of Questions : 6]

[Total No. of Printed Pages : 3

EY-73

B.Tech. Ist Semester (CSE, IT & Elect.)

Examination, 2023-24

Basic Electronics Engineering

Paper - BE - 105

Time : 3 Hours]

[Maximum Marks : 60

**Note : -Ques. No. 1 is compulsory. Attempt any two parts from
Ques. No. 2 to Ques. No. 6.**

1. Write short answers :

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(1)

P.T.O.

- (i) Define Barrier Potential of a Diode.
 - (ii) Give Features of Schottky Diode.
 - (iii) What is Early effect ?
 - (iv) Give applications of 555 Timer.
 - (v) How Lissajous figures are formed ?
2. (a) What are Intrinsic and Extrinsic Semiconductors ? Explain.
 - (b) Draw and Explain the V-I Characteristics of a PN junction diode.
 - (c) Explain the difference between Ideal and Practical Semiconductor diode.
3. (a) Explain the working of Varactor Diode.
 - (b) What is the function of a Rectifier circuit ? Compare Half wave and Full wave rectifier circuit.
 - (c) Draw Clipper and Clamper circuits and explain working with the help of waveforms.
4. (a) Name different configurations of BJT and compare them.

- (b) Name different biasing circuits used in BJT and explain any one of them in detail.
- (c) Based on the construction, explain how FET's working is different from BJT.
5. (a) Draw and explain the working of Comparator circuit using OPAMP.
- (b) What are multivibrators ? Give it's types.
- (c) Give Ideal Characteristics of an OPAMP.
6. (a) Draw the block diagram of CRO and explain how it's focusing system works.
- (b) Where do we use storage oscilloscope ? Give it's types.
- (c) Write short note on Strain Gauge.
