



## Shree H.N.Shukla group of colleges

PHYSICS  
F.Y.B.Sc. (Sem. II) (CBCS)  
Unit Test examination  
PAPER- 201

### UNIT - 2 : SEMICONDUCTOR AND TRANSISTOR

DATE :

Total marks :30

**Instructions:** All questions are compulsory.

The right side figure indicates total marks of the question.

Draw the figure wherever necessary.

Write answers of all the questions in main answer sheets.

#### SECTION-A

**Q.1: One marks questions:**

**[5 MARKS ]**

- 1 What is Rectifier?
- 2 What is break down voltage of p-n junction diode?
- 3 What is called Ripple in rectification?
- 4 What is transistor ?
- 5 Draw the symbol of N-P-N and P-N-P transistor.

#### SECTION – B

**Q.2 (A): Short Questions: Write all three : [2 Marks each]**

**[6 MARKS]**

- 1 What is voltage stabilization? Why it is necessary?
- 2 State the relation between  $\alpha$  and  $\beta$ .
- 3 Explain Half wave rectifier.

**Q.2 (B) : Short questions: Write all three: [3 Marks each]**

**[9 MARKS]**

- 1 Explain the working of a diode as a half wave rectifier.
- 2 Give the comparison of rectifier.
- 3 Explain input characteristic of C-E transistor connection.

**Q.2 (C): Write Detail Note on [Any two]: [5 Marks each]**

**[10 MARKS]**

- 1 Explain Capacitor filter.
- 2 Describe transistor working of N-P-N transistor.
- 3 Discuss the structure of transistor.
- 4 Explain Chock input filter.