

<b>Periods: 30</b>	<b>Examination : 40</b>	<b>Internal : 10</b>	<b>Total Marks: 50</b>
--------------------	-------------------------	----------------------	------------------------

## **Syllabus**

### **1. Semiconductor Basics (8 Periods)**

Atomic Structure and Bonding

Intrinsic and Extrinsic Semiconductors

Energy Bands and Bandgap

### **2. Semiconductor Devices (6 Periods)**

Diodes: Types and Characteristics

Transistors: Bipolar Junction Transistor (BJT) and Field Effect Transistor (FET)

Optoelectronic Devices: LEDs and Photodiodes

### **3. Semiconductor Applications (8 Periods)**

Amplifiers and Signal Processing

Semiconductor Memory Devices

Power Electronics

### **4. Semiconductor Fabrication (8 Periods)**

Overview of Semiconductor Manufacturing

Cleanroom Technology

Photolithography and Etching

### **Reference Books:**

1. Principles of electronics: V K Mehta
2. Digital Electronics: Malvino and Leech
3. Electronic devices: Milman and Halkias
4. Electronic devices: Thomas Flyod
5. Introduction to microprocessors: Gaonkar
6. Microprocessors: B.Ram
7. Digital and Microprocessor: Flyod

## **Introduction to Semiconductor Devices**

### **Students Enrollment List**

**Academic Year 2022-23**

Sr. No.	Name of the Students	Class
1	Gobade Shushant Ravindra	B.Sc. SY
2	Gumme Rupesh Ramesh	B.Sc. SY
3	Jadhav Dharti Shivraj	B.Sc. SY
4	Sabane Avinash Vitthal	B.Sc. SY
5	Sarule Yogesh Satish	B.Sc. SY
6	Suryawanshi Nilesh Santosh	B.Sc. SY
7	Suryawanshi Shirishkumar Laxman	B.Sc. SY
8	Kokate Nagarjun Ashok	B.Sc. TY
9	Londhe Datta Ram	B.Sc. TY
10	Pathan Avejkan Adamkhan	B.Sc. TY
11	Shinde Shubhangi Shrikant	B.Sc. TY
12	Shinde Vaishnavi Shrikant	B.Sc. TY
13	Suryawanshi Balaji Madhukar	B.Sc. TY

# Shivneri Mahavidyalaya Shirur Anantpal Dist. Latur

## Department of Physics

Certificate course in Introduction to Semiconductor Devices Attendance Sheet

August 2022

Sr. No.	Name of the Students	Dates																Extra
		2	3	4	5	6	9	10	11	13	16	17	18	20	21	24	25	
1	Gobade Shushant Ravindra	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P
2	Gurume Rupesh Ramesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	Jadhav Dharti Shivraj	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	Sabane Avinash Vitthal	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	Sarale Yogesh Satish	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	Suryawanshi Nilesh Santosh	A	P	A	P	A	A	P	A	P	A	P	A	P	A	P	A	A
7	Suryawanshi Shirishkumar Laxman	A	P	A	P	A	A	P	A	P	A	P	A	P	A	P	A	A
8	Kokate Nagarjun Ashok	P	P	P	A	P	P	P	A	P	P	A	P	A	P	P	P	P
9	Londhe Datta Ram	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Parhan Ayyekhan Adambhan	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	Shinde Shubhangi Srikant	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	Shinde Vaishnavi Shrikant	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	Suryawanshi Balaji Madhukar	P	P	P	P	P	A	P	A	P	A	P	A	P	A	P	A	P

  
**HEAD**  
 Dept. of Physics  
 Shivneri Mahavidyalaya,  
 Shirur Anantpal Dist. Latur (M.S.)

# Shivneri Mahavidyalaya Shirur Anantpal Dist. Latur

## Department of Physics

Certificate course in Introduction to Semiconductor Devices      Attendance Sheet      September 2022

Sl. No.	Name of the Students	Dates																
		1	3	6	7	8	10	13	14	15	17	20	21	22	24	Extra		
1	Gobade Shreshant Ravindra	P	P	P	A	P	P	P	A	P	P	P	A	P	P	P		
2	Gurume Rupesh Ramesh	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
3	Jadhav Dharti Shivraj	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
4	Sahane Avirash Vitthal	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
5	Saurale Yogesh Satish	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
6	Suryawanshi Nilesh Santosh	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A		
7	Suryawanshi Shirishkumar Lavaman	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A		
8	Kokate Nagarjun Ashok	P	P	P	A	P	P	P	A	P	P	A	P	P	P	P		
9	Londhe Datta Ram	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P		
10	Pathan Azeekhan Adanikhan	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
11	Shinde Shaubhaji Shrikant	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
12	Shinde Vaishnavi Shrikant	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		
13	Suryawanshi Balaji Madhukar	P	P	P	P	P	A	P	A	P	A	P	A	P	A	A		



**HEAD**  
Dept. Of Physics  
Shivneri Mahavidyalaya  
Shirur Anantpal Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Gobade Sushant Ravindra** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Gumme Rupesh Ramesh** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---

---



**CERTIFICATE**

This is to certify that, Mr. **Sarule Yogesh Satish** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---




**CERTIFICATE**

This is to certify that, Miss. **Jadhav Dharathi Shivraj** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)



**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---




**CERTIFICATE**

This is to certify that, Mr. **Sabane Avinash Vitthal** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Suryawanshi Nilesh Santosh** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Suryawanshi ShirishKumar Laxman** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Kokate Nagarjun Ashok** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---




**CERTIFICATE**

This is to certify that, Mr. **Londhe Datta Ram** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Pathan Avejkhan Adamkhan** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
H. H. H. H.  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**MAHAVIDYALAYA, SHIRUR ANANTPAL,  
DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Shinde Shubhangi Shrikant** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Shinde Vaishnavi Shrikant** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M.S.)



**SHIVNERI MAHAVIDYALAYA, SHIRUR  
ANANTPAL, DIST. LATUR**

---



**CERTIFICATE**

This is to certify that, Mr. **Suryawanshi Balaji Madhukar** having successfully completed the Certificate Course in **Introduction to Semiconductor Devices**. Conducted by **Department of Physics**, during the academic year 2022-23.

Hence Certified.

Date: 10.12.2022

  
Head  
Dept. of Physics  
Shivneri Mahavidyalaya,  
Shirur, Anantpal, Dist. Latur (M. S.)

  
PRINCIPAL  
Shivneri Mahavidyalaya,  
Shirur Anantpal, Dist. Latur (M. S.)