Periods: 30 Examination : 40 Internal : 10 Total Marks: 50

#### 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 Avejkhan 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

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# **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

Dept. Of Physics
Shivouri Mahavidyalavia
Shirur Anzolpai, Digit Later (A.S.)

PRINCIPAL
Shivneri Mahavidyalaya,
Shirur Anantpal, Dist. Latur (M.5.)

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# **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.

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Date: 10.12.2022

Dept. OLPhysica Shiveri Mahavayahya Shirut Angripal Dist Later (M.S.) PRINCIPAL
Shivneri Mahavidyalaya,
Shirur Anantpai,Dist.Latur (M.5)

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# **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

Dept. Of Physics
Shivneri Mahavinyalaya.
Shirur Ananipal Digit Latur (M.S.)

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

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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



PRINCIPAL
Shivnert Mahavidyalaya,
Shirur Anantpai, Dist. Latur (M.S.)

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# **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.

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Date: 10.12.2022

Dept. Of Physica Shluneri Maliavidyalaya Shirur Anantpal Dipt. Latur (al. 5.)

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

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# **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.

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Date: 10.12.2022

Dept. Of Physics Shives Mahavidgalaya Shiruf Angolgal, Old Latur (B.S.) PRINCIPAL
Shivneri Mahavidyalaya,
Shirur Anantpal, Dist, Latur (M. 5.)

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This is to certify that, Mr. Suryawanshi ShirishKumar Laxman having successfully completed the Certificate Course in Introduction to

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Date: 10.12.2022

Dept. Of Physics
Shiveen Mahavidyataya,
Shirut Anantpai. Dept. Later (M.S.)

PRINCIPAL
Shivneri Mahavidyalaya,
Shirur Anantpal, Dist. Latur (M. 5.)

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# **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.

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Date: 10.12.2022

Dept. OLPhysics
Shiwari Malavidyalsya
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PRINCIPAL
Shivneri Mahavidyalaya,
Shirur Anantpal, Dist, Latur (M. 3

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# **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

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

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# **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.

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Date: 10.12.2022



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

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# **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.

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Date: 10.12.2022

Dept. Of Physics Shive of Mahavidgalasia Shirus Angolpal, Old Latur (B.S.) PRINCIPAL
Shivneri Mahavidyalaya,
Shirur Anantpal, Dist, Latur (M.S.)



# 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

Shirur Anantpal Dist Latur (M.S.)



# 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.

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Date: 10.12.2022

Shivnert Mahavidyalaya, Shirur Anantpal Dist Latur (M. 5.)