

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Physics

Short term course on "Understanding of Basic Electronics Devices"

Short Term Course Report 2024-25

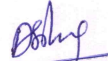
Department of physics runs a short term course entitled "**Understanding of Basic Electronics Devices**" for B.Sc.-II,III students. The purpose of this Course is to provide basic knowledge of students related with electronic devices and their applications, soldering methods, component study, assembling of circuits and testing etc. The duration of this short term course is of 30 hour. Dr. A. R. Patil, HoD physics working as the coordinator of the course.

The students of B.Sc.-II, III Physics are admitted for this course so that after completion of B.Sc. degree the students can use this knowledge for self-business or in job in electronics industry. Ten students have taken admission to this course. The course fee is Rs.300/- per student. The lectures of this course were taken by preparing course Time Table. After curriculum completion, the multiple choice test of 50 marks is conducted. The course completion certificates were given to successful students.

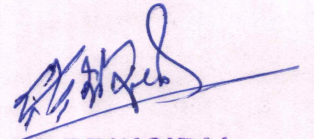


Coordinator

Dr. A. R. Patil


Head

Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.



I/C PRINCIPAL
R.C. SHAHU COLLEGE
KOLHAPUR



Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Physics

Name of the Course: Understanding of Basic Electronics Devices

Department: Physics

Course Implementation Year: 2019-2020

Coordinator Name & Contact No.: Dr. A. R. Patil, 9403825243

Duration: 30 hours

Course fee: 300/-

Eligibility: 12th Pass

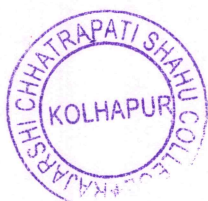
Intake Capacity: 10

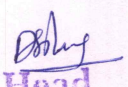
Objectives:

- To provide basic knowledge of electronic components so that students will understand the working of electronic components.
- To develop practical skill related with electronics and electronic circuits.
- To provide job opportunity or self-employment to the students.

Learning Outcomes:

- Students can recognize electronic components.
- Students can recognize working of electronic components.
- Students can build electronic circuits.




Head
Department of Physics
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Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Physics

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Academic Year 2024-25

Syllabus:

Unit-I: Introduction Basic electricity

6 P

Safety and precaution of instruments, soldering and disoldering technique, current, voltage, amplitude and frequency.

Unit-II: Introduction of basic electronic components

6P

Resistance, capacitance, inductance, transformer construction and working of transformer and its types, type of power supplies i.e. a.c. and d.c., use of multimeter and testing of components

Unit-III: Understanding of Semiconductor devices

6 P

Introduction to basic semiconductor concept, diode and its types and working, transistors and its type and working.

Unit IV: Digital IC and Timmer IC555

3P

IC pin digarms ,various digital IC's,Timmer 555 its pin diagarma,blockdigram and working,applications of IC 555.

Unit-IV: Building simple circuits on breadboards

2P

Introduction to PCB, Tag board, Vero board and Breadboard and its uses.

Unit V: Practical work

6P

1. Testing of digital IC's.
2. Construction of 5V Regulated power supply.
3. Construction of astable, bistable ,monostablemultivibrator circuits.

References:

1. Electronic instruments Hand Book- Clyde F.Combs
2. Electronic engineers Reference Book, L.W.Tuner
3. Starting Electronics, Keith Brindley



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Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

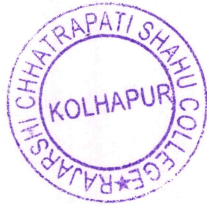
Department of Physics

Short term course on "Understanding of Basic Electronics Devices"

Academic Year 2024-25

Notice

All the students of B. Sc. I, II and III (Physics) are hereby informed that the Department of Physics is going to run a certificate course entitled "Understanding of Basic Electronics Devices" for academic year 2024-25. All the students should make their registration for this course by paying Rs. 300/-as registration fee.



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Head

Department of Physics
Rajarshi Chh. Shahu College, Kolhapur

RayatShikshanSanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Physics

Short term course on "Understanding of Basic Electronics Devices"

Academic Year 2024-25

List of admitted students and fees received

Sr. No.	Roll No.	Name of the student	Mobile No.	Fee received	Sign
1	S-III 35	CHAVAN SHREYA SHASHIKANT	9322642450	300/-	<i>S.S. Chavan</i>
2	S-III 36	DETALE RAHUL RAJARAM	8485855010	300/-	<i>Rahul DETALE</i>
3	S-III 37	KULKARNI SAMARTH BHIMRAO	8010575252	300/-	<i>Samarth</i>
4	S-III 39	PATIL AKSHTA KUMAR	9011376026	300/-	<i>A.K. Patil</i>
5	S-III 40	RAVI VIKAS MALCLESHPA	9665649022	300/-	<i>Ravi</i>
6	S-III 35	PACHGAVE SUMIT SATISH	7276247534	300/-	<i>Sumit</i>
7	S-II 46	KASEKAR VISHWJEET MANOHAR	9284943450	300/-	<i>Vishal</i>
8	S-II 47	MAJAGE AVDHOT ASHOK MAJAGE	8421230778	300/-	<i>Ashok</i>
9	S-II 48	JANGAM JAYAM DAYANAND	9022033843	300/-	<i>Jayam</i>
10	S-II 56	KOLEKAR PRANEETA MOTIRAM	8830301427	300/-	<i>Praneeta</i>
Total				3000/-	

Receipt No. 6983 to 6992 dated on 26/03/2025



[Signature]
Head
Department of Physics
Rajarshi Chh. Shahu College, Kolhapur,

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Physics

Short term course on "Understanding of Basic Electronics Devices"

Academic Year 2024-25

Time Table

Lectures per week and Time

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
3:58 pm	1:24 pm	3:10 pm	2:22 pm	1:24 pm	3:58 pm
to	to	to	to	to	to
4:46 pm	2.12 pm	3:58 pm	3:10 pm	2.12 pm	4:46 pm



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Head

Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.

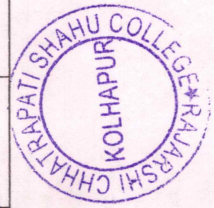
Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Physics

Short term course on "Understanding of Basic Electronics Devices"

Academic Year 2024-25

Student attendance sheet

Sr. No.	Name of the student	02/01/2025	03/01/2025	04/01/2025	07/01/2025	08/01/2025	09/01/2025	10/01/2025	11/01/2025	13/01/2025	14/01/2025
1	CHAVAN SHREYA SHASHIKANT	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan
2	DETALE RAHUL RAJARAM	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
3	KULKARNI SAMARTH BHIMRAO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	PATIL AKSHTA KUMAR	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil
5	RAVI VIKAS MALLESHAPPA	Wape	Wape	Wape	Wape	Wape	Wape	Wape	Wape	Wape	Wape
6	PACHGAVE SUMIT SATISH	SA	SA	SA	SA	SA	SA	SA	SA	SA	SA
7	KASEKAR VISHWJEET MANOHAR	Unkall	Unkall	Unkall	Unkall	Unkall	Unkall	Unkall	Unkall	Unkall	Unkall
8	MAJAGE AVDHOOT ASHOK MAJAGE	Majage	Majage	Majage	Majage	Majage	Majage	Majage	Majage	Majage	Majage
9	JANGAM JAYAM DAYANAND	Jangam	Jangam	Jangam	Jangam	Jangam	Jangam	Jangam	Jangam	Jangam	Jangam
10	KOLEKAR PRANEETA MOTIRAM	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish



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Academic Year 2024-25

Student attendance sheet

Sr. No.	Name of the student	15/01/2025	16/01/2025	17/01/2025	18/01/2025	20/01/2025	21/01/2025	22/01/2025	23/01/2025	24/01/2025	25/01/2025
1	CHAVAN SHREYA SHASHIKANT	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan	S.S. Chavan
2	DETALE RAHUL RAJARAM	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
3	KULKARNI SAMARTH BHIMRAO	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
4	PATIL AKSHTA KUMAR	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil	A.K. Patil
5	RAVI VIKAS MALLESHAPPA	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
6	PACHGAVE SUMIT SATISH	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
7	KASEKAR VISHWJEET MANOHAR	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
8	MAJAGE AVDHOOT ASHOK MAJAGE	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
9	JANGAM JAYAM DAYANAND	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
10	KOLEKAR PRANEETA MOTIRAM	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish




Head
 Department of Physics
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Academic Year 2024-25

Student attendance sheet

Sr. No.	Name of the student	27/01/2025	28/01/2025	29/01/2025	30/01/2025	31/01/2025	01/02/2025	02/02/2025	03/02/2025	04/02/2025	05/02/2025	06/02/2025
1	CHAVAN SHREYA SHASHIKANT	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan	ss.chavan
2	DETALE RAHUL RAJARAM	Pranish	Pranish		Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish
3	KULKARNI SAMARTH BHIMRAO	ss	ss	ss	ss	ss	ss	ss	ss	ss	ss	
4	PATIL AKSHTA KUMAR	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL	A.K.PATIL
5	RAVI VIKAS MALLESHAPPA	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel
6	PACHGAVE SUMIT SATISH	ss		ss	ss		ss	ss	ss	ss	ss	ss
7	KASEKAR VISHWJEET MANOHAR	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel	mr.patel
8	MAJAGE AVDHOOT ASHOK MAJAGE	Mr.patel		Mr.patel	Mr.patel	Mr.patel	Mr.patel	Mr.patel	Mr.patel	Mr.patel	Mr.patel	Mr.patel
9	JANGAM JAYAM DAYANAND	ss	ss	ss	ss	ss	ss	ss	ss	ss	ss	ss
10	KOLEKAR PRANEETA MOTIRAM	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish	Pranish



Pranish
Head

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Rajarshi Chh. Shahu College, Kolhapur.

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Rajarshi Chhatrapati Shahu College, Kolhapur

Department of Physics

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Academic Year 2024-25

Student attendance sheet

Sr. No.	Name of the student	07/02 2025	08/02 2025	10/02 2025	11/02 2025	13/02 2025	14/02 2025	15/02 2025	17/02 2025	18/02 2025	20/02 2025
1	CHAVAN SHREYA SHASHIKANT	sschavan Present	sschavan Present	sschavan Present	sschavan Present	sschavan Present	sschavan Present	sschavan Present	sschavan Present	sschavan Present	sschavan Present
2	DETALE RAHUL RAJARAM	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
3	KULKARNI SAMARTH BHIMRAO	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present
4	PATIL AKSHTA KUMAR	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1	A.K.Patil mp-1
5	RAVI VIKAS MALLESHAPPA	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1
6	PACHGAVE SUMIT SATISH	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1
7	KASEKAR VISHWJEET MANOHAR	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1
8	MAJAGE AVDHOOT ASHOK MAJAGE	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1
9	JANGAM JAYAM DAYANAND	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1
10	KOLEKAR PRANEETA MOTIRAM	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1	mp-1



Dr. B. B. Head

Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Short Term Course In Physics
Understanding of Basic Electronics Devices
Academic Year 2024-25

Date: 08/03/2025

Maximum Marks: 50

Time: 60 Min.

Class: B.Sc.II, III	Roll No.	Name of the student:
---------------------	----------	----------------------

- Note: 1. All questions are compulsory
2. All questions carry equal marks
3. Each question is for 2 Marks
4 Write correct answer alphabet in rectangle

Q.1. Zener diode is used as ----- regulator

- a) Current b) voltage c) charge

Q.2. IN0001 is ----- diode

- a) rectifier b) zener c) photo

Q.3. If NPN transistor has current gain of 100 and base current of 1mA then its collector current is ---

- a) 1mA b) 10mA c) 100mA

Q.4. The capacitor stores electrical energy in the form of -----

- a) Electric field b) magnetic field c) electro-magnetic field

Q.5. LDR stands for -----

- a) Light Dependent Resistor b) Light Doped Resistor
c) Light Dependent Rectifier

Q. 6. In photodiode its current increases with -----

- a) increase in intensity of light falling on it b) current in the circuit
c) resistance in the circuit

Q.7. IC 741 is known as -----

- a) Operational amplifier b) Integrated circuit c) Timmer IC

Q.8. In circuit symbol of NPN transistor the arrow -----

- a) points out of the emitter b) points into the emitter
c) points out of the collector

Q.9. IC 555 is used as -----

- a) Astable multivibrator b) monostable multivibrator c) both (a) & (b)

Q.10 To build an electronic circuit ----- used

- a) Breadboard b) PCB c) both (a) & (b)



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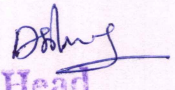
Short term course on "Understanding of Basic Electronics Devices"

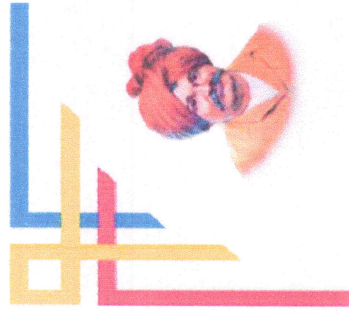
Academic Year 2024-25

Result sheet

Sr.No.	Roll No.	Name of the student	Marks obtained out of 50
1	S-III 35	CHAVAN SHREYA SHASHIKANT	42
2	S-III 36	DETALE RAHUL RAJARAM	40
3	S-III 37	KULKARNI SAMARTH BHIMRAO	36
4	S-III 39	PATIL AKSHTA KUMAR	46
5	S-III 40	RAVI VIKAS MALCLESHPA	32
6	S-II 13	PAWAR OMKAR DHANANJAY	42
7	S-II 35	GURAV RUTUJA SHANKAR	44
8	S-II 48	ATTAR MOHAMMAD ABID MUNEER	36
9	S-II 56	JANGAM JAYAM DAYANAND	32
10	S-II 59	KOLEKAR PRANEETA MOTIRAM	36




Head
Department of Physics
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Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Reaccredited by NAAC (IV cycle) at 'A++' grade with CGPA =3.78



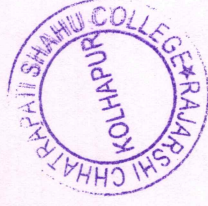
DEPARTMENT OF PHYSICS

CERTIFICATE OF PARTICIPATION

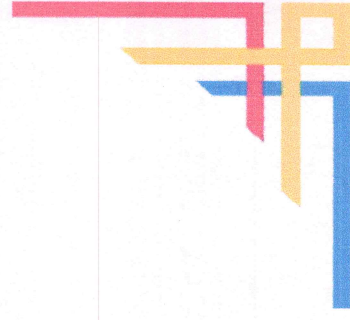
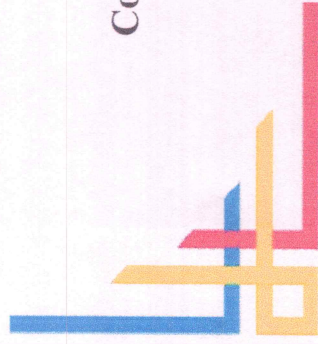
This is to certify that,.....
has successfully completed a short term course on Understanding of Basic Electronics Devices conducted by
Department of Physics, Rajarshi Chhatrapati Shahu College, Kolhapur during academic year 2024-2025.

Coordinator

Head
Department of Physics

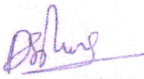


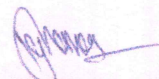
Principal

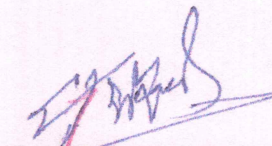


"Education through self-help is our motto" - KARMAVEER
Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Department of Physics
(Self – Funded)
Short Term Course “Understanding of Basic Electronics
Devices” 2024-25
Income and Expenditure Statement

Income	Amount (in Rs.)	Expenditure	Amount (in Rs.)
Particulars		Particulars	
		1) GST (18%) 3000×0.18	540/-
		2) Remuneration for Resource Person Lumsum Total amount 3000- 540/- (GST) $2460 \times 40\% = 984$ /- this amount is equally distributed to 2 persons)	
		i) Shri. N. V. Sankpal	492/-
		ii) Smt. S. S. Gawade	492/-
		3) Balance to College	1476/-
Total	3000=00	Total	3000=00


Dr. Smt. A. R. Patil
 Head & Coordinator
 Department of Physics


Dr. M. K. Kannade
 In charge, Short Term Courses


Dr. D. R. Bhosale
 I/C Principal

