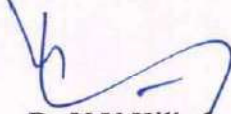


Rayat Shiksha Santha's
Rajarshi Chhatrapati Shahu College Kolhapur
Department of Physics
Short Term Course Report 2019-20

Department of physics runs a short term course (COC) entitled "**Understanding of Basic Electronics Devices**" for B.Sc.-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 course is of 30 periods. Dr.V.V.Killedar, HoD physics working as the coordinator of the course.

The students of B.Sc.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. 05 students have taken admission to this course. The course fee is Rs.200/- per student. The lectures of this course was taken on Friday and Saturday of every week. After curriculum completion, the multiple choice test of 50 marks is conducted. The course completion certificate was given to successful students.



Dr.V.V.Killedar

Head

Department of Physics



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

Short term course on "Understanding of Basic Electronics Devices"

Academic Year 2019-20

➤ **Aims & objective:**

1. To provide basic knowledge of electronic components to understand the working of electronic components.
2. To improve electronic skill among the students.
3. To provide job opportunity or self-employment to the students.

➤ **Course Fee:** Rs.200/-

➤ **Course duration:** 30 Periods of 48 Minutes

➤ **Students admitted for the course:** B.Sc.III Physics students

➤ **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

6 P

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 diagrams, various digital IC's, Timmer 555 its pin diagram, block diagram and working, applications of IC 555.

Unit-IV: Building simple circuits on breadboards

2 P

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

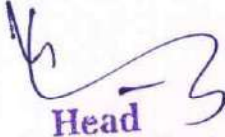
Unit V: Practical work

6P

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

References:

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


Head
 Department of Physics
 Rajarshi Chh. Shahu College, Kolhapur.

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

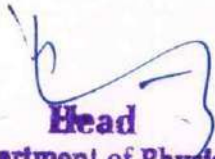
Short term course on "Understanding of Basic Electronics Devices "

Academic Year 2019-20

Notice

All the students of B.Sc.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 2019-20. All the students should make their registration for this course by paying Rs. 200/-as registration fee .




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 2019-20

Notice

All the students of B.Sc.III (Physics) are hereby informed that the Inaugural function of certificate course entitled "Understanding of Basic Electronics Devices" organized by Department of Physics for academic year 2020-21 will held on 02/9/2019 at 11 am . All the students should remain present for this function in Raman Laboratory, Department Physics at am.


Head
Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.



Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur

DEPARTMENT OF PHYSICS

2019-2020

Inauguration of Short term course

"Understanding of Basic Electronic Devices"

Table Programme


Day and Date: Tuesday, 03/09/2019

Time: 3.45 pm

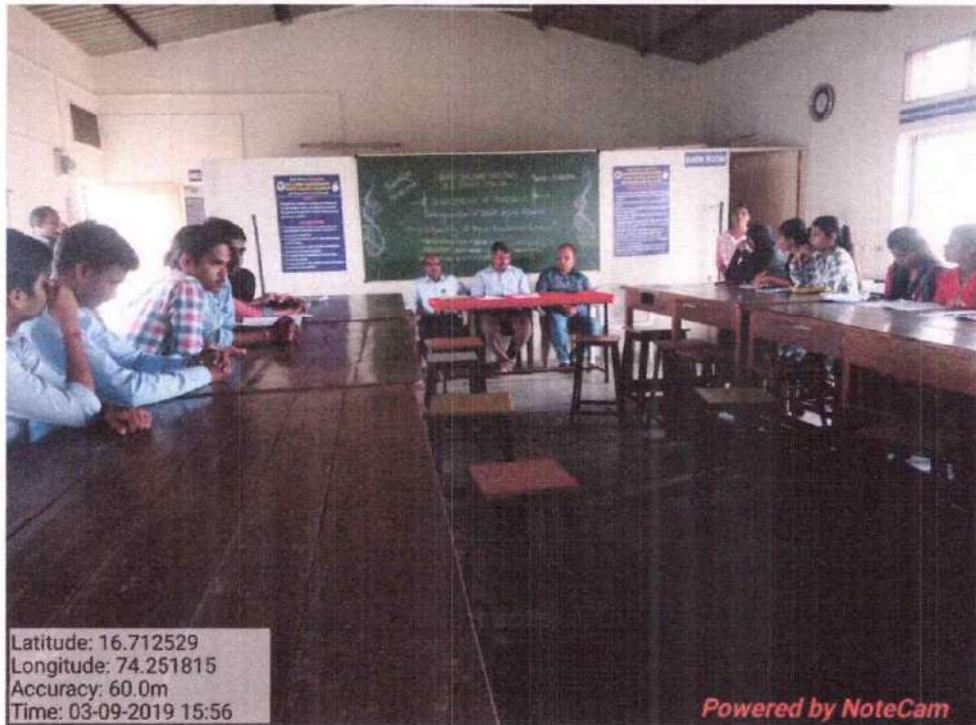
Venue: Department of Physics

-
- **Introduction** : **Dr. V. V. Killedar**
(Head, Department of Physics)
 - **Felicitation of Guest by Head department of Physics**
 - **Chief Guest** : **Mr. R. P. Dethe**
(Vice. Principal, R. C. Shahu College, Kolhapur)
 - **Presidential** : **Mr. P. T. Bathe**
(Head, Department of Mathematics)
 - **Vote of Thanks** : **Dr. S. S. Kumbhar**
 - **Anchoring** : **Miss. N. J. Kamble**




Head
Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.

Inauguration of Short term Course on “Understanding of Basic Electronics Devices ” (3/9/2019) Year 2019-20



[Handwritten Signature]
Head

Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur

DEPARTMENT OF PHYSICS

2019-2020

Inauguration of Short term course

"Understanding of Basic Electronic Devices"

Table Programme

Day and Date: Tuesday, 03/09/2019

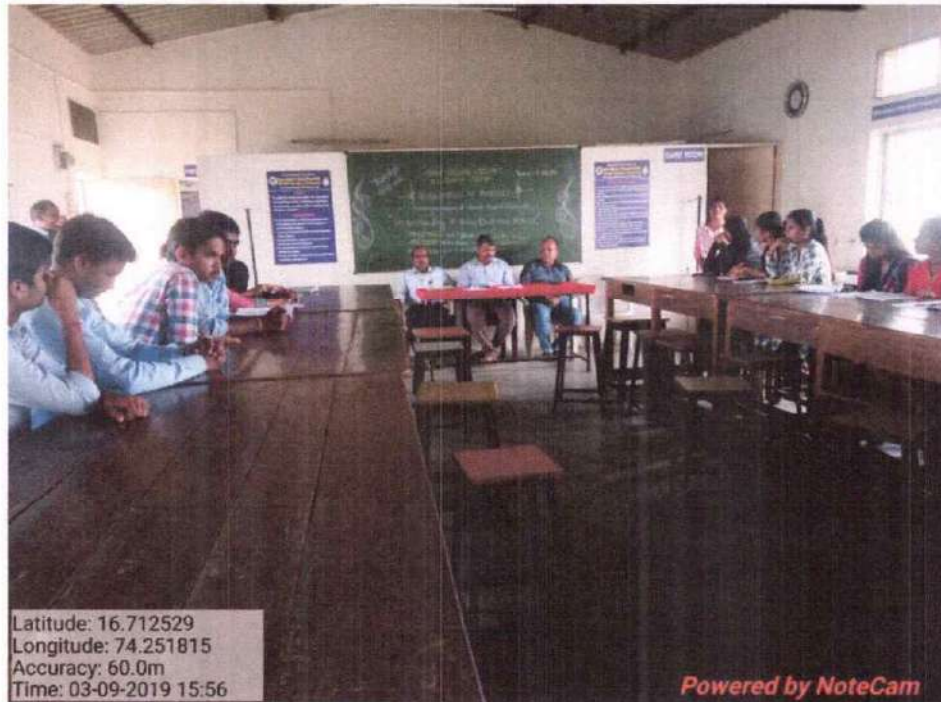
Time: 3.45 pm


Venue: Department of Physics

Attendance

Sr. No.	Name of the Student	Class	Mob. No.	Sign.
1	Naik Sunehara Ayyaj	BSc-I	9156471027	Naik
2	Patil Bhagyashri Prakash	BSc-I	9022361650	Patil
3	Mane Sakshi Rajendra	BSc-I	9309748060	S.R. Mane
4	Patil Pooja Manohar	BSc-I	9284528566	Pooja
5	Patil Ratiksha Vilas	B.Sc.I	9284528566	Patil
6	Kurane Yogeshwari Nivars	B.SCI	9970224899	Kurane
7	Kumbhar Nikita Tanaji	B.SCI	9850407607	N.T. Kumbhar
8	Kamble Dhanshei Tanaji	B.SCI	9112827102	E. Kamble
9	Sanje Snehal Sandeep	B.Sc.I	9307167488	Sanje
10	Kajal Mahadev Landage	B.SCI	9011644132	Landage
11	Heena Tashad Alam Shaikh	B.SCI	7057578849	Heena
12	Mahite Sayali Sambhaji	BSCIII	7249172024	Mahite
13	Salokhe Asavari Dnyandev	-II-	8856879520	Salokhe
14	Mogale Shubham Rameshwar	B.SCI	9370727084	Mogale
15	Solankar Vikram Kailas	-II-	7030727928	Solankar
16	Pawar Rangamathi Rajarajam	-II-	8805589368	Pawar
17	RAHUL DATTATRAY PATIL	-II-	9119568291	Rahul
18	Amir Vikram Kamble	B.SCI	9359983266	Amir
19	Pawara Niraj Baijnath	-II-	7350356165	Pawara
20	Shubham Amanda Kamble	-II-	87447907571	Kamble

Inauguration of Short term Course on Understanding of Basic Electronic Devices (3/9/2019) Year 2019-20




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"

Year 2019-20

List of admitted students and fees received

Sr.No.	Roll No.	Name of the student	Fee received	Student Sign.
1	SIII 87	KHAWARE ROSHAN DINAKAR	200	
2	SIII 88	MOHITE SAYALI SAMBHAJI	200	
3	SIII 90	SOLAKHE ASAWARI DNYANADEV	200	
4	SIII 89	MULIK GURUDATTA UTTAM	200	
5	SIII 91	SHINDE RUPALI MADHUKAR	200	
6	SII 09	BASKAR KRANTI DAGADU	200	
7	SII 34	KUMBHAR ANUJA VASANT	200	
8	SII 26	JADHAV SNEHAL PANDURANG	200	
9	SII 27	JADHAV URJITA UTTAM	200	
10	SII 02	AMBALNURE JYOTI HANAMANTA	200	
11	SII 70	PAWAR PRANALI BHAIRU	200	
12	SII 67	PAWAR MAYARI AMBADAS	200	
Total			2400/-	

Receipt No. 29354 to 29363 dated 7/11/2020


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"

Year 2019-20

Time Table

Friday and Saturday of Every Week (Two lectures per day)

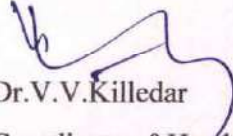
Lecture Time 3:00 pm to 3:45 pm

3:45 pm to 4:30 pm

Lecture Dates

Jan.2020	Feb.2020	March 2020
3/1/2020	7/2/2020	6/3/2020
4/1/2020	8/2/2020	7/3/2020
10/1/2020	14/2/2020	13/3/2020
11/1/2020	15/2/2020	20/3/2020
17/1/2020	28/2/2020	21/3/2020
18/1/2020	29/2/2020	27/3/2020




Dr. V. V. Killedar
Coordinator & Head
Department of Physics

Head
Department of Physics
Rajarshi Chh. Shahu College, Kolhapur.

**Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur**

Department Of Physics

Short Term Course Attendance Sheet 2019-2020 (Online mode)

Sr. No	Name Of Student	13/10/20	20/10/20	27/10/20	03/11/20	10/11/20	17/11/20	24/11/20	01/12/20	08/12/20	14/12/20	21/12/20	28/12/20	04/01/21	11/01/21	18/01/21	25/01/21	01/02/21	08/02/21	15/02/21	22/02/21	01/03/21	
1	Shinde Rohini Madhukar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	Salokhe Aasawari Dyandev	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	Mohite Sayali Sambhaji	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	Mulik Gurudatt Uttam	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	Kavare Roshan Dinkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	Bhaskar Kranti Dagadu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	Kumbhar Anuja Vasant	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	Jadhav Snehal Pandurang	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	Jadhav Urjita Uttam	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	Ambalnure Jyoti Hanmanta	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	Pawar Pranali Bhairu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	Pawar Mayuri Ambadas	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Sr. No	Name Of Student	13/10/20	20/10/20	27/10/20	03/11/20	10/11/20	17/11/20	24/11/20	01/12/20	08/12/20	14/12/20	21/12/20	28/12/20	04/01/21	11/01/21	18/01/21	25/01/21	01/02/21	08/02/21	15/02/21	22/02/21	01/03/21	
1	Shinde Rohini Madhukar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
2	Salokhe Aasawari Dyandev	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
3	Mohite Sayali Sambhaji	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
4	Mulik Gurudatt Uttam	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
5	Kavare Roshan Dinkar	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
6	Bhaskar Kranti Dagadu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
7	Kumbhar Anuja Vasant	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
8	Jadhav Snehal Pandurang	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
9	Jadhav Urjita Uttam	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
10	Ambalnure Jyoti Hanmanta	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
11	Pawar Pranali Bhairu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
12	Pawar Mayuri Ambadas	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	



Head
(Department of Physics)

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Short Term Course In Physics
Understanding Of Basic Electronics Devices
Academic Year 2019-20

Date:04 /04/2020

Maximum Marks: 50

Time: 60 Min.

Class: B.Sc.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. 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.2 ----- emits light when forward biased.
 a) LED b) Rectifier diode c) photo diode
- 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. To avoid shock hazards do not touch -----
 a) Line wire b) neutral wire c) earth wire
- Q.5 .To build an electronic circuit ----- used
 a) Breadboard b) PCB c) both (a) & (b)
- Q. 6. 100 Coulombs of electricity flow past a point in an electrical circuit, in 20 sec.
 The current flowing in circuit is -----
 a) 10A b) 2A c) 5A
- Q.7. In bridge rectifier the numbers of diodes used are -----
 a) 4 b) 2 c) 3
- Q.8. LDR stands for -----
 a) Light Dependent Resistor b) Light Doped Resistor
 c) Light Dependent Rectifier
- Q.9. Zener diode is always operated in ---- condition
 a) forward biased b) reverse biased c) unbiased
- Q.10. IC 741 is known as -----
 a) Operational amplifier b) integrated circuit c) timer IC
- Q.11. IC 555 is used as -----
 a) Astable multivibrator b) Monostable multivibrator c) both (a) & (b)

- Q.12. Zener diode is used as ----- regulator
- a) Current b) voltage c) charge
- Q.13. Oscillator circuits are use to produce --- voltage
- a) a.c. b) d.c. c) both a.c. and d.c.
- Q.14. The 230 house hold a.c. voltage has frequency ----- Hz
- a) 100 b)50 c)25
- Q.15. An inductor or coil electrical energy is stored in the form of -----
- a) Electric field b) magnetic field c) electro-magnetic field
- Q.16. If A current of 1 A flows through a resistor of 10 Ω .
Then voltage produced across resistor is --
- a)10V b)1V c)100V
- Q.17 Transistor is used in ----- circuits
- a) Amplifier b) rectifier c) both (a) and (b)
- Q. 18 The capacitor stores electrical energy in the form of -----
- a) Electric field b) magnetic field c) electro-magnetic field
- Q.19. In step up transformer secondary voltage is ---- --primary voltage.
- a) greater than b) less than c) equal to
- Q.20. The law of series resistor says that the overall resistance of a number of resistor
in series is the sum of the individual resistance.
True or false ?
- Q.21. One nano is equal to -----
- a) $1 \times 10^{-6} \text{ A}$ b) $1 \times 10^{-8} \text{ A}$ c) $1,000 \times 10^{-12} \text{ A}$
- Q.22. IN0001 is ----- diode
- a) rectifier b) zener c) photo
- Q23. Five 10 k Ω resistors are in series. One 50 k Ω resistor is placed in parallel across
them all. The overall resistance is -----
- a) 50 k Ω b) 52 k Ω c) 25 k Ω
- Q.24. 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.25. For soldering of electronic components on PC ----- is used.
- a) Soldring Iron b) Electrical Geyser c) Electric heater

**Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur**

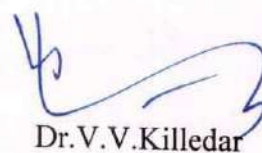
Department of Physics

Short term course on "Understanding of Basic Electronics Devices"

Year 2019-20

Result Sheet

Sr.No.	Roll No.	Name of the student	Marks obtained out of 50
1	87	KAVARE ROSHAN DINAKAR	44
2	88	MOHITE SAYALI SAMBHAJI	40
3	89	MULIK GURUDATTA UTTAM	42
4	90	SOLAKHE ASAWARI DNYANADEV	44
5	91	SHINDE ROHINI MADHUKAR	40
6	09	BHASKAR KRANTI DAGADU	46
7	34	KUMBHAR ANUJA VASANT	42
8	26	JADHAV SNEHAL PANDURANG	40
9	27	JADHAV URJITA UTTAM	44
10	02	AMBALNURE JYOTI HANMANTA	44
11	70	PAWAR PRANALI BHAIRU	46
12	67	PAWAR MAYURI AMBADAS	48


Dr. V. V. Killedar

Head

Department of Physics



“Education through self-help is our motto” - Karmaveer

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

(Reaccredited 3rd Cycle by NAAC at 'A' Grade with CGPA 3.07)



DEPARTMENT OF PHYSICS

CERTIFICATE OF PARTICIPATION

This is to certify that, Mr./Miss. _____
has successfully completed the certificate course on “ *Understanding of Basic Electronic Devices* ” of 30 period duration conducted by Department of Physics during academic year 2019-2020.

Dr. V. V. Killedar
Coordinator

Dr. S. T. Salunkhe
Principal