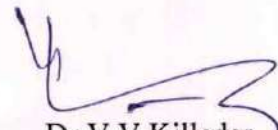


RayatShikshaSantha's
Rajarshi Chhatrapati Shahu College Kolhapur
Department of Physics
Short Term Course Report 2018-19

Department of physics runs a short term course (COC) entitled 'Repairing of Electronic devices & Instruments' 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 short term course is of 30 hour. 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. 12 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 between 3:00 p.m. to 4:30 p.m. After curriculum completion, the multiple choice test of 50 marks is conducted. The course completion certificates are given to successful students.

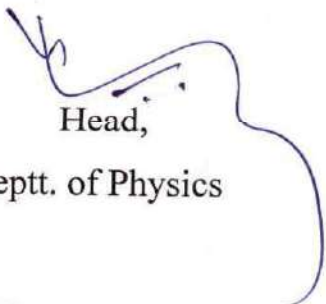


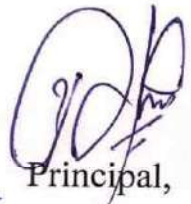

Dr.V.V.Killedar

Date 1/11/2019.

Notice

All the students of B.Sc.Part III (Physics) are hereby informed that The Department of Physics is going to run short term course entitled '**Repairing and maintenance of Electronic Devices and Instruments**' for academic year 2018-19. The interested students should make their registration in the Department by paying Rs.200/- as Registration fee.


Head,
Deptt. of Physics


Principal,
R. C. Shahu college, Kolhapur



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

Short term course on "Repairing of Electronic Devices and Instruments"

Academic Year 2018-19

➤ **Aims & objective:**

- II) To provide basic knowledge of electronic components to understand the working of electronic components.
- III) To improve electronic skill among the students.
- IV) To provide job opportunity or self-employment to the students.

➤ **Course Fee:** Rs.200/-

➤ **Course duration:** 30 period of 48 min duration

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

➤ **Syllabus:**

Unit-I: Introduction of electronic Ideas 6 P
 Safety and precaution of instruments, soldering and disoldering technique, current, voltage, amplitude and frequency.

Unit-II: Introduction and measurement of basic electronic components 8 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: Semiconductor devices 6 P
 Introduction to basic semiconductor concept, diode and its types and working, transistors and its type and working, IC's

Unit-IV: Building simple circuits on breadboards 4 P
 Introduction to PCB, Tag board, Vero board and Breadboard

Unit V: Practical work 6P
 1. Construction of Dark sensor using transistor, phototransistor and photodiode.
 2. Construction of 5V Regulated power supply.
 3. Construction of a melody generator using UM66.

References:

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



(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 "Repairing Of Electronic Devices and Instruments"


Year 2018-19

List of admitted students and fees received

Sr. No.	Roll No.	Name of the student	Fee collected Rs.	Student sign.
1	112	KAMBLE PRATHAMESH SURYAKANT	200/-	<u>Neel</u>
2	113	SATPUTE SMITESH SHASHIKANT	200/-	<u>Satpute</u>
3	114	KAMBLE RUSHIKESH MAHADEV	200/-	<u>Rajis</u>
4	115	YEDAGE PARVIN DEELIP	200/-	<u>Yedage</u>
5	116	*KUMTOLE DIYARANI SHEETAL	200/-	<u>Kumtole</u>
6	117	*PATIL SUSHAMA DATTATRAYA	200/-	<u>Patil</u>
7	118	*SALASKAR SHRADHA D.	200/-	<u>Salaskar</u>
8	119	*LOHAR CHETANA SURESH	200/-	<u>Lohar</u>
9	120	*DEVASTHALI SHIVANI PRAMOD	200/-	<u>De</u>
10	121	*DHUMAL AISHWARYA ANAND	200/-	<u>Aadhmal</u>
11	122	*KADVEKAR VAISNAVI SAMPAT	200/-	<u>Kadvekar</u>
12	141	NAIK TANMAY TANAJI	200/-	<u>Naik</u>
Total Rs.			2400/-	

Receipt No. 25207 to 25218 dated 18/3/2019

Cheque No. 663 dated 18/3/2019 Rayat Co-op Bank Ltd. Kop.


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

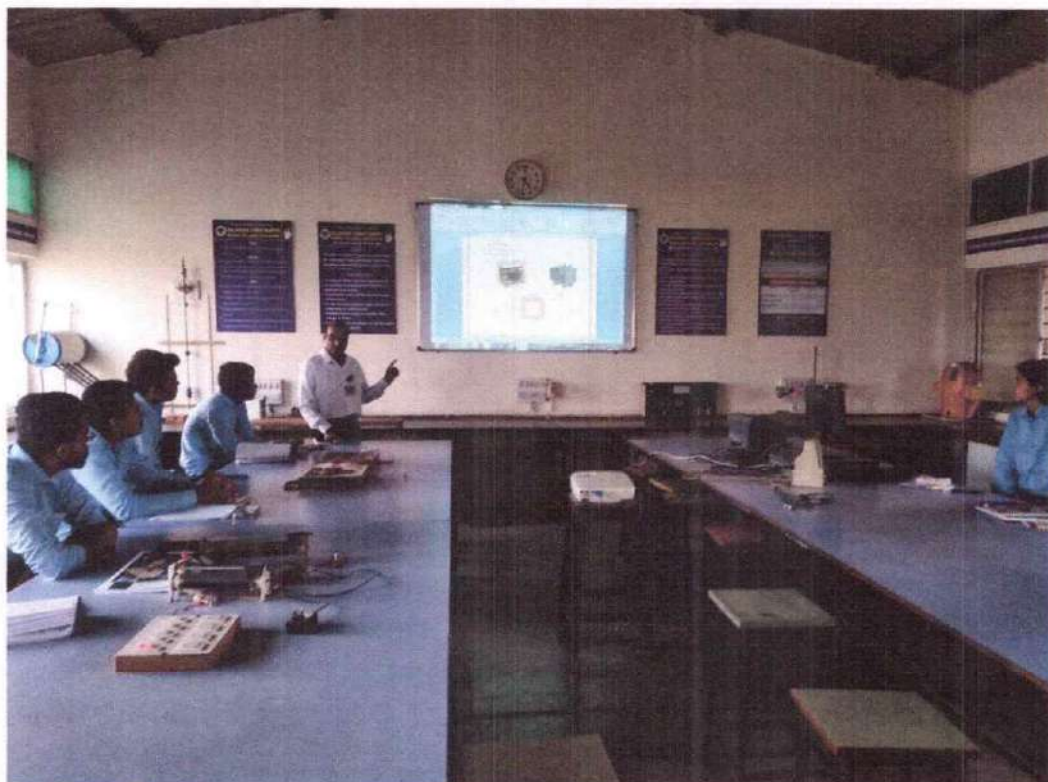



Short term course Inauguration 12/03/2019



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

Year 2018-19 Inauguration of Short term Course on “ Repairing of Electronic Devices & Instruments” (3/9/2018)




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

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

Short term course on "Repairing of Electronic Devices & Instruments"

Year 2018-19

Time Table

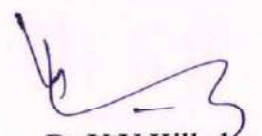
Friday and Saturday of Every Week (Two lectures per day)

Lecture time: 3:00 p.m. – 3:45 p.m.

3:45 p.m. – 4:30 p.m.

Lecture Dates

Jan 2019	Feb. 2019	March 2019
4/1/2019	1/2/2019	1/3/2019
5/1/2019	2/2/2019	2/3/2019
11/1/2019	15/2/2019	8/3/2019
12/1/2019	16/2/2019	9/3/2019
18/1/2019	22/2/2019	-
19/1/2019	23/2/2019	-
-	-	-
-	-	-


Dr. V. V. Killedar



Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College, Kolhapur

Short term course on "Repairing of Electronic Devices & Instruments"

Year 2018-19

Presence Sheet

Sr. No.	Roll No.	Name	Mobile No.	4/11/2019	5/11/2019	11/1/2019	17/1/2019	18/1/2019	19/1/2019	11/2/2019	22/2/2019
1	112	Kamble Prathamesh Suryakant	9766688518	Present	Present	Present	Present	Present	Present	Present	Present
2	113	Satpute Smitesh Shashikant	7767871647	Present	Present	Present	Present	Present	Present	Present	Present
3	114	Kamble Rushikesh Mahadev	9172969750	Present	Present	Present	Present	Present	Present	Present	Present
4	115	Yedage Parvin Deelip	9421010095	Present	Present	Present	Present	Present	Present	Present	Present
5	116	*Kumtule Diyarani Sheetal	9284714146	Present	Present	Present	Present	Present	Present	Present	Present
6	117	*Patil Sushama Dattatraya	9075434959	Present	Present	Present	Present	Present	Present	Present	Present
7	118	*Salaskar Shradha D.	9881056295	Present	Present	Present	Present	Present	Present	Present	Present
8	119	*Lohar Chetana Suresh	7378769382	Present	Present	Present	Present	Present	Present	Present	Present
9	120	*Devasthali Shivani Pramod	9923687872	Present	Present	Present	Present	Present	Present	Present	Present
10	121	*Dhumal Aishwarya Anand	7387261487	Present	Present	Present	Present	Present	Present	Present	Present
11	122	*Kadvekar Vaisnavi Sampat	8554847881	Present	Present	Present	Present	Present	Present	Present	Present
12	133	Naik Tanmay Tanaji	8530186439	Present	Present	Present	Present	Present	Present	Present	Present



Head
Department of Physics
Rajarshi Chh. Shahu College, Kolhapur

Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur

Short term course on "Repairing of Electronic Devices & Instruments"

Year 2018-19

Presence Sheet

Sr. No.	Roll No.	Name	Mobile No.	15/12/2018	16/12/2018	20/12/2018	23/12/2018	27/12/2018	31/12/2018	03/01/2019	07/01/2019	10/01/2019
1	112	Kamble Prathamesh Suryakant	9766688518	Present	Present	Present	Present	Present	Present	Present	Present	Present
2	113	Satpute Smitesh Shashikant	7767871647	Present	Present	Present	Present	Present	Present	Present	Present	Present
3	114	Kamble Rushikesh Mahadev	9172969750	Present	Present	Present	Present	Present	Present	Present	Present	Present
4	115	Yedage Parvin Deelip	9421010095	Present	Present	Present	Present	Present	Present	Present	Present	Present
5	116	*Kumtule Diyarani Sheetal	9284714146	Present	Present	Present	Present	Present	Present	Present	Present	Present
6	117	*Patil Sushama Dattairaya	9075434959	Present	Present	Present	Present	Present	Present	Present	Present	Present
7	118	*Salaskar Shradha D.	9881056295	Present	Present	Present	Present	Present	Present	Present	Present	Present
8	119	*Lohar Chetana Suresh	7378769382	Present	Present	Present	Present	Present	Present	Present	Present	Present
9	120	*Devasthali Shivani Pramod	9923687872	Present	Present	Present	Present	Present	Present	Present	Present	Present
10	121	*Dhumal Aishwarya Anand	7387261487	Present	Present	Present	Present	Present	Present	Present	Present	Present
11	122	*Kadvekar Vaisnavi Sampat	8554847881	Present	Present	Present	Present	Present	Present	Present	Present	Present
12	141	Naik Tanmay Tanaji	8530186439	Present	Present	Present	Present	Present	Present	Present	Present	Present



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 "Repairing of Electronic Devices & Instruments"

Year 2018-19

Attendance Sheet Of . . . Course Test

Day: Friday
Date: 15/03/2019

Time: 3.00 to 4.00 pm

Sr. No.	Roll No.	Name of the student	Sign
1	112	Kamble Prathamesh Suryakant	<i>Neel</i>
2	113	Satpute Smitesh Shashikant	<i>Satpute</i>
3	114	Kamble Rushikesh Mahadev	<i>P. Kamble</i>
4	115	Yedage Parvin Deelip	<i>Yedage</i>
5	116	*Kumtore Diyarani Sheetal	<i>Kumtore</i>
6	117	*Patil Sushama Dattatraya	<i>Patil</i>
7	118	*Salaskar Shradha D.	<i>Salaskar</i>
8	119	*Lohar Chetana Suresh	<i>Lohar</i>
9	120	*Devasthali Shivani Pramod	<i>Devasthali</i>
10	121	*Dhumal Aishwarya Anand	<i>Dhumal</i>
11	122	*Kadvekar Vaisnavi Sampat	<i>Kadvekar</i>
12	141	Naik Tanmay Tanaji	<i>Naik</i>

[Signature]
 Dr. V.V. Killedar

Head

Department Of Physics



Rayat Shikshan Sanstha's
Rajarshi Chhatrapati Shahu College, Kolhapur
Short Term Course In Physics
Repairing of Electronic Devices and Instruments
Academic Year 2018-19

Date: 15/03/2019

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.----- emits light when forward biased.
 a) LED b) Rectifier diode c) photo diode

Q.2. The 230 house hold a.c. voltage has frequency ----- Hz
 a) 100 b) 50 c) 25

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. IN0001 is ----- diode
 a) rectifier b) zener c) photo

Q.6. 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.7. 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.8. An inductor or coil electrical energy is stored in the form of -----
 a) Electric field b) magnetic field c) electro-magnetic field

Q.9. Zener diode is always operated in ----- condition
 a) forward biased b) reverse biased c) unbiased

Q.10. Oscillator circuits are use to produce --- voltage
 a) a.c. b) d.c. c) both a.c. and d.c.

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 In bridge rectifier the numbers of diodes used are -----
- a) 4 b) 2 c) 3
- Q.14. In step up transformer secondary voltage is ----- primary voltage.
- a) greater than b) less than c) equal to
- Q.15. 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.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. IC 741 is known as -----
- a) Operational amplifier b) integrated circuit c) timer IC
- Q.20. 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.21. One nano is equal to -----
- a) 1×10^{-6} A b) 1×10^{-8} A c) $1,000 \times 10^{-12}$ A
- Q.22 To build an electronic circuit ----- used
- a) Breadboard b) PCB c) both (a) & (b)
- 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 LDR stands for -----
- a) Light Dependent Resistor b) Light Doped Resistor
c) Light Dependent Rectifier
- Q.25 For soldering of electronic components on PC ----- is used.
- a) Soldering Iron b) Electrical Geyser c) Electric heater

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

Short term course on "Repairing of Electronic Devices & Instruments"

Year 2018-19

Result Sheet

Sr. No.	Roll No.	Name of the student	Marks obtained out of 50
1	112	Kamble Prathamesh Suryakant	48
2	113	Satpute Smitesh Shashikant	44
3	114	Kamble Rushikesh Mahadev	40
4	115	Yedage Parvin Deelip	46
5	116	*Kumtole Diyarani Sheetal	48
6	117	*Patil Sushama Dattatraya	42
7	118	*Salaskar Shradha D.	44
8	119	*Lohar hetana Suresh	48
9	120	*Devasthali Shivani Pramod	46
10	121	*Dhumal Aishwarya Anand	42
11	122	*Kadvekar Vaisnavi Sampat	40
12	141	Naik Tanmay Tanaji	44



(Handwritten Signature)

Dr. V.V. Killedar

Head

Department Of Physics



“ Education through self-help is our motto”- Karmveer
Rayat Shikshan Sanstha's



RAJARSHI CHHATRAPATI SHAHU COLLEGE, KOLHAPUR

(Reaccredited by NAAC (III cycle) at 'A' Grade with CGPA=3.07)

DEPARTMENT OF PHYSICS



This is to certify that Mr/ Miss _____ has

successfully completed the certificate course on 'Repairing of Electronic Devices and Instruments ' of 30 periods
duration conducted by Department of Physics during academic year 2018-19 .

Date :


Dr. V. V. Killedar
Course Co-ordinator
Head, Dept. of Physics,

R.C. Shahu College, Kolhapur.



Dr. C. J. Khilare
Principal
Rajarshi Chht. Shahu College,
Kolhapur

67