



**Shankarlal Khandelwal Arts,  
Science and Commerce College, Akola (MS)**

**REPORT  
OF  
Skill Based Certificate Course on  
DESIGNING AND REPAIRING OF LED BULB  
5<sup>th</sup> to 9<sup>th</sup> May 2022**

**Academic year  
2021-22**

**Submitted**

**By**

**Dr H J Kharat**

**Coordinator**

**Department of Physics**

**[www.khandelwalcollege.edu.in](http://www.khandelwalcollege.edu.in)**

**30<sup>th</sup> June 2022**



**Shankarlal Khandelwal Arts, Science and Commerce College, Akola (MS)**

**Department of Physics**

**Skill Based Certificate Course on**

**Designing and Repairing of LED Bulb**

**5<sup>th</sup> to 9<sup>th</sup> May 2022**

Department of Physics and Career Katta of the college jointly organized Skill Based Certificate course on 'Designing and Repairing of LED Bulb' from 5<sup>th</sup> to 9<sup>th</sup> May 2022 in collaboration with ABS Foundation, Akola. The Guest Speaker and resource person was Dr. Durga Nachane, Director, ABS foundation, Akola. The course cum workshop or training was inaugurated at the hands of Hon. Principal Dr. J. M. Saboo on 5<sup>th</sup> May 2022. The course is of 30 hours duration and completed on 9<sup>th</sup> May 2022. The Theory and Practicals were conducted in three sessions as per the syllabus and schedule. The quiz of 30 marks was organized on 9<sup>th</sup> May 2022. The certificates were issued after valedictory session to all the 50 participants who completed assignments and qualified the quiz. The honorarium in the form of cheque of Bank of Maharashtra Rs. 12,500/- with no.004131 Dt.18<sup>th</sup> May 2022 was issued to Dr. Durga Nachane for successful completion of the course. Forty Eight students and two teachers paid Rs. 250/- online and registered their names through the link <https://forms.gle/q9hVwdiVedwCJJyq7>.

<b>Content and Schedule</b>
<b>DAY 1 : 5/5/2022</b>
<b>Theory</b> – Introduction to basic components – Resistor, varistor, capacitor, power factor capacitor, transformer, PN diode, LED, SMD, Driver IC+ <b>Assignments</b> <b>Practical</b> – Identification of resistor, varistor, capacitor, transformer, diodes.
<b>DAY 2: 6/5/2022</b>
<b>Theory</b> – Construction, Working, application, uses of PN diode and LED.+ <b>Assignments</b> <b>Practical</b> – Testing of resistor, capacitor, transformer, diode.
<b>DAY 3: 7/5/2022</b>
<b>Theory</b> – Types of LED bulb 1) RC driver 2) DOB 3) Driver LED bulb.+ <b>Assignments</b> <b>Practical</b> – Introduction to different type of LED bulb.
<b>DAY 4: 8/5/2022</b>
<b>Theory</b> – RC circuit, DOB circuit, rectifier, filter, LED driver IC (power regulator).+ <b>Assignments</b> <b>Practical</b> – Mounting different type of circuit on breadboard.
<b>DAY 5: 9/5/2022</b>
<b>Theory</b> – Construction and working of LED bulb.+ <b>Assignments</b> <b>Practical</b> – Soldering of components on PCB and assembling of LED bulb and Repairing of different type of LED bulb. <b>Quiz</b> – 30 Marks MCQ test
<b>TIME</b>
<b>Theory session-</b> 1) 9am to 10.30am 2) 10.35am to 12. 05pm <b>Practical session-</b> 12.30 pm to 3.30pm





Shankar Lal Khandelwal Arts, Science and Commerce College, Akola (MS)

Department of Physics: B.Sc. III Sem. VI: 2021-22

Certificate Course in 'Designing and Repairing of LED Bulb' 5<sup>th</sup> May to 9<sup>th</sup> May 2022:

Attendance

S.N	NAME OF THE STUDENT	5/5/2022	6/5/2022	7/5/2022	8/5/2022	9/5/2022
1.	Ku. Akansha Ashokrao Wadatkar	—	—	—	—	—
2.	Ku. Ashwini Mahadeo Sable	—	—	—	—	—
3.	Ku. Dhanashri Vinod Pajal	—	—	—	—	—
4.	Ku. Gauri Rajesh Kasture	Kasture	Kasture	Kasture	Kasture	Kasture
5.	Ku. Mukta Gajendra Punkar	Gajendra	Gajendra	Gajendra	Gajendra	Gajendra
6.	Ku. Neha Gajanan Metange	Metange	Metange	Metange	Metange	Metange
7.	Ku. Nishika Sunil Hursade	Hursade	Hursade	Hursade	Hursade	Hursade
8.	Ku. Prachi Ganesh Aghadate	Aghadate	Aghadate	Aghadate	Aghadate	Aghadate
9.	Ku. Pranali Ravindra Ghumre	Ghumre	Ghumre	Ghumre	Ghumre	Ghumre
10.	Ku. Pritee Dalal Dhan Dhole	Dhole	Dhole	Dhole	Dhole	Dhole
11.	Ku. Roshani Ramdas Tekade	Tekade	Tekade	Tekade	Tekade	Tekade
12.	Ku. Rutika Manoj Niwankar	Niwankar	Niwankar	Niwankar	Niwankar	Niwankar
13.	Ku. Vaishnavi Prakash Shelke	Shelke	Shelke	Shelke	Shelke	Shelke
14.	Ku. Vaishnavi Rameshwar Dutonde	V.R. Dutonde	V.R. Dutonde	V.R. Dutonde	V.R. Dutonde	V.R. Dutonde
15.	Ku. Vaishnavi Ramrao Pingale	—	—	—	—	—
16.	Ms. Aachal Manish Wankhede	Wankhede	Wankhede	Wankhede	Wankhede	Wankhede
17.	Mr. Abhijit Gulabrao Bahute	—	—	—	—	—
18.	Mr. Aniket Jitendra Kapate	Kapate	Kapate	Kapate	Kapate	Kapate
19.	Mr. Chetan Rajkumar Miskin	Miskin	Miskin	Miskin	Miskin	Miskin
20.	Mr. Govardhan Govinda Sapkal	Sapkal	Sapkal	Sapkal	Sapkal	Sapkal
21.	Mr. Harish Pralhadrao Kharap	Kharap	Kharap	Kharap	Kharap	Kharap
22.	Mr. Harshal Gopal Sable	Sable	Sable	Sable	Sable	Sable
23.	Mr. Kartik Shrikrishna Pawar	Pawar	Pawar	Pawar	Pawar	Pawar
24.	Ms. Krisha Kartik Shah	Shah	Shah	Shah	Shah	Shah
25.	Mr. Manisha Amar Pajal	Pajal	Pajal	Pajal	Pajal	Pajal

Organizers

Prof. R. K. Shirsat  
Co-coordinator

Dr. V. D. Mane  
Coordinator

Dr. H. J. Kharat  
Coordinator

Dr. S. K. Devalde  
HoD, Physics

Dr. J. M. Saboo  
Principal





Shankar Lal Khandelwal Arts, Science and Commerce College, Akola (MS)

Department of Physics: B.Sc. III Sem. VI: 2021-22

Certificate Course in 'Designing and Repairing of LED Bulb' 5<sup>th</sup> May to 9<sup>th</sup> May 2022:

Attendance

S.N.	NAME OF THE STUDENT	5/5/2022	6/5/2022	7/5/2022	8/5/2022	9/5/2022
26	Mr. Manisha Pravin Ambarkar					
27	Mr. Nikita Madhukar Ujade					
28	Mr. Pavan Gajanan Nimbekar	-	-	-	-	-
29	Mr. Pranav Najukrao Wankhade	-	-	-	-	-
30	Mr. Pranav Shrikrushna Bopulkar					
31	Mr. Prathmesh Ashok Shirale	-	-	-	-	-
32	Mr. Sakshi Kailas Wankhade					
33	Mr. Sarita Shankar Mahalle					
34	Mr. Sneha Devidas Dhore					
35	Mr. Swapnil Prakash Kanhed	-	-	-	-	-
36	Mr. Swaraj Ganesh Sanap	-	-	-	-	-
37	Mr. Tejas Pramod Lakkewar	-	-	-	-	-
38	Mr. Trupti Panjabrao Telharkar					
39	Mr. Vaibhav Sudhakar Satao	-	-	-	-	-
40	Mr. Vaishnavi Nandkishor Chendane					
41	Ms. Rutuja Samadhan Jane					
42	Ms. Ashvini Vinod Ghatole					
43	Ms. Nikita Shivnath Gayakwad					
44	Ms. Achai Dnyaneshwar Dorkar					
45	Ms. Vaishnavi Prashant Iche					
46	Faculty	-	-	-	-	-
47	Dr. S. K. Devade					
48	Dr. H. J. Kharat					
49	-	-	-	-	-	-

Organizers

Prof. R. K. Shirsat  
Co-coordinator

Dr. V. D. Mane  
Coordinator

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HoD, Physics

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Shankar Lal Khandelwal Arts, Science and Commerce College, Akola (MS)

Department of Physics: B.Sc. II Sem. IV: 2021-22

Certificate Course in 'Designing and Repairing of LED Bulb' 5<sup>th</sup> May to 9<sup>th</sup> May 2022:

Attendance

S.N	NAME OF THE STUDENT	5/5/2022	6/5/2022	7/5/2022	8/5/2022	9/5/2022
1.	Ku. Apurva Udhav Date	-	-	-	-	-
2.	Ku. VAISHNAVI PRAMOD DHAGE	-	-	-	-	-
3.	Mr. GAYATRI SANJAY KHADSAN	Attended	Attended	Attended	Attended	Attended
4.	Ms. GAURI GANESH SHENDE	-	-	-	-	-
5.	Ms. JANHVI SURESH SHENDE	-	-	-	-	-
6.	Ku. DIKSHA ARVIND TAYADE	-	-	-	-	-
7.	Ku. GOURI DIPAK SAIWAL	-	-	-	-	-
8.	Ku. LAXMI SANTOSH PACHKAWADE	-	-	-	-	-
9.	Ku. Mrunal Nilkanth Deshmukh	-	-	-	-	-
10.	Ku. SAKSHI DADARAO TELGOTE	-	-	-	-	-
11.	Ku. SAKSHI RAMESH ALASHI	Ku. Sakshi	Ku. Sakshi	Ku. Sakshi	Ku. Sakshi	Ku. Sakshi
12.	Mr. DIPALI AJAY SONONE	-	-	-	-	-
13.	Mr. KHUSHI RAVINDRA BULE	-	-	-	-	-
14.	Mr. ROHIT SUNIL KHANDARE	Attended	Attended	Attended	Attended	Attended
15.	Mr. Rushikesh Vijay Asare	Rev. Asare	Rev. Asare	Rev. Asare	Rev. Asare	Rev. Asare
16.	Mr. SAURABH SANTOSH KALE	Skate	Skate	Skate	Skate	Skate
17.	Mr. Shrivani Sunilrao Kakde	-	-	-	-	-
18.	Mr. SHUBHAM ARUN RAUT	Skate	Skate	Skate	Skate	Skate
19.	Mr. Tanaya Mukund Dande	-	-	-	-	-
20.	Mr. TEJAS PRAMODRAO RAUT	-	-	-	-	-
21.	Mrs. KIRAN GAJANAN PANDE	-	-	-	-	-
22.	Ku. Bhoomika Ashish Khatri	-	-	-	-	-
23.	Ku. KALYANI SANJAY SAWLEKAR	-	-	-	-	-
24.	Ku. SWAPNIL KESHAV WANKHADE	-	-	-	-	-
25.	Mr. HARSHAD MANGESH WARUDKAR	-	-	-	-	-

Organizers

Prof. R. K. Shirsat  
Co-coordinator

Dr. V. D. Mane  
Coordinator

Dr. H. J. Kharat  
Coordinator

Dr. S. R. Desai  
HoD, Physics

Dr. T. M. Saboo  
Principal





Shankarlal Khandelwal Arts, Science and Commerce College, Akola (MS)

Department of Physics: B.Sc. II Sem. IV: 2021-22

Certificate Course in 'Designing and Repairing of LED Bulb' 5<sup>th</sup> May to 9<sup>th</sup> May 2022:

Attendance

S.N.	NAME OF THE STUDENT	5/5/2022	6/5/2022	7/5/2022	8/5/2022	9/5/2022
26	Mr. PRASAD MAJESH FATE	-	-	-	-	-
27	Mr. Prathamesh Vinayak Mahajan	Present	Present	Present	Present	Present
28	Mr. RAHUL PRAVIN SHELKE	-	-	-	-	-
29	Mr. SANKET DILIP PAWAR	-	-	-	-	-
30	Mr. Sunil Pradip Tikar	Present	Present	Present	Present	Present
31	Mr. VAISHNAVI TUKARAM MADAVI	-	-	-	-	-
32	Ku. BHUMIKA MADHUKAR TAYADE	-	-	-	-	-
33	Ku. Shital Gajanan Wahurwagh	-	-	-	-	-
34	Mr. ADITYA GAJANAN DANDGE	-	-	-	-	-
35	Mr. Datta Shankarrao Chandurkar	Dr. Chandurkar	Dr. Chandurkar	Dr. Chandurkar	Dr. Chandurkar	Dr. Chandurkar
36	Mr. Himanshu Sharad Dongare	-	-	-	-	-
37	Mr. MAYUR MADHUKAR JAWANJAL	-	-	-	-	-
38	Mr. SANKET ANIRUDDHA SARAF	-	-	-	-	-
39	Ku. NEHA ANIL PANDEY	-	-	-	-	-
40	Mr. BHUSHAN SURESH DAKHORE	-	-	-	-	-
41	Mr. GAURI VITTHAL PATEKHEDE	Present	Present	Present	Present	Present
42	Mr. SACHIN BABURAO GAYAKWAD	-	-	-	-	-
43	Ku. SANJANA SANJAY GADHEKAR	Present	Present	Present	Present	Present
44	Mr. CHAITANYA SUNDERLAL KHOWAL	Present	Present	Present	Present	Present
45	Mr. Riya Ramesh Bopulkar	Present	Present	Present	Present	Present
46	Ku. Gauri Vishwasrao Wadalkar	Present	Present	Present	Present	Present
47	Mr. DOLLY DINESH MER	-	-	-	-	-
48	Mr. Virushabh Dinesh Mer	Present	Present	Present	Present	Present
49	Ku. RUTUJA DNYANESHWAR HANDGE	-	-	-	-	-

Organizers

Prof. R. K. Shirsat  
Co-coordinator

Dr. V. D. Mane  
Coordinator

Dr. H. J. Kharat  
Coordinator

Dr. S. K. Upade  
HoD, Physics

Dr. J. M. Saboo  
Principal



**Shankarlal Khandelwal Arts, Science and Commerce College, Akola**  
**Skill Based Certificate Course on 'Designing and Repairing of LED Bulb': 5<sup>th</sup> May to 9<sup>th</sup> May 2022**  
**Organized by the Department of Physics and Career Katta**

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<b>Max. Marks:- 30</b>	<b>QUIZ</b>	<b>Time:-45 Minutes,</b>
<b>Name .....</b>		
<b>Class:-B.Sc.....Year, Marks Obtained:-</b>		

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1. Which one of the following LED emits an invisible light?  
 A) Laser LED, B) Bicolour LED,  
 C) Infra-red LED, D) Tricolour LED
2. \_\_\_\_ makes LED's radiate red or yellow light.  
 A) Gallium Arsenide Phosphide, B) Gallium Phosphide,  
 C) Gallium, D) Gallium Arsenide
3. Which one of the following is not LED materials?  
 A) GaAs, B) GaP,  
 C) SiC, D) SiO<sub>2</sub>
4. What is the typical range of forward voltage of an LED?  
 A) 5-12v, B) 1.7-3.3v,  
 C) 5-12mv, D) 1.7-3.3mv
5. The efficiency of an LED for generating light is directly proportional to the  
 A) Applied voltage C) Current injected  
 B) Temperature D) Level of doping
6. Which type of resistance used in potentiometer?  
 A) Constant C) Variable  
 B) Zero D) Increasing
7. In LED, light is emitted because  
 A) Recombination of charge carrier takes place. B) Diode gets heated up  
 C) Light falling on the diode get amplified D) Light gets reflected due to lens action.
8. Which formulae represent energy of a photon?  
 A)  $E=hf$ , B)  $E=hc/\lambda$ , C)  $E=hf/2$ , D) Both A&B
9. What is LED?  
 A) P-n diode, B) Thermister, C) Gate, D) Transmitter
10. What is LED stands for?  
 A) Light Emitting Display, B) Low energy Display,  
 C) Light Emitting diode, D) Light emitting detector
11. What is the use of LED Driver?  
 A) Its convert DC to AC, B) Its convert AC to DC,  
 C) It converts AC to AC. D) It converts DC to DC
12. Example of an active display and a passive display respectively are  
 A) LCD and Gas discharge plasma, B) LED and LCD,  
 C) Gas discharge plasma and LED, D) Electrophoretic Image display and LED
13. What is the output of an LED driver?  
 A) Chopped AC, B) Pulsating DC, C) DC, D) AC
14. The p-n junction in a LED is made of \_\_\_\_  
 A) Silicon, B) Germanium, C) Gallium Arsenide, D) Gallium
15. Which colour LED was first available commercially?  
 A) Red, B) Yellow, C) Blue, D) Green
16. The junction in LED \_\_\_\_ doped.  
 A) Lightly, B) Heavily, C) Moderately, D) None of these
17. The spectral distribution of LED is \_\_\_\_  
 A) Symmetric, B) Asymmetric, C) Linear, D) Non-linear
18. The light in LED is emitted through \_\_\_\_  
 A) Anode, B) Dielectric Window, C) Cathode, D) Substrate
19. In LED, light is emitting because  
 A) Light falls on LED, B) Recombination of charges take place.  
 C) PN junction emits light when heated. D) IR light falls on LED.
20. What is colour LED lamp is commonly used for domestic use?  
 A) White, B) Black, C) Red, D) Green
21. Which of the following LED colour is not present in an LED TV?  
 A) Green, B) White, C) Red, D) Blue
22. What is the forward voltage of LED?  
 A) 0.6vdc, B) 1.5vdc-3vdc, C) 0.3vdc, D) 1.8vdc-3.3vdc
23. In Bridge Rectifier how many diodes used...  
 A) 1, B) 2, C) 3, D) 4
24. The compound material of semiconductor used in LED's make use of \_\_\_\_ elements of periodic table.  
 A) Group -3, B) Group -4, C) Group -5, D) Both A and C
25. LED operates at \_\_\_\_ bias.  
 A) Forward, B) Reverse, C) Neutral, D) None of the above.
26. Recombination of electron-hole produces \_\_\_\_ LED's.  
 A) Photons, B) Protons, C) Nucleus, D) Junction of capacitance
27. Which LED is brighter?  
 A) Homojunction LED, B) Heterostructure LED, C) Both a and B, D) None of the above
28. LED made with Aluminium Gallium Arsenide produces \_\_\_\_ colour.  
 A) Red, B) Yellow, C) Infrared, D) Both A & C
29. Ohms Law is..  
 A)  $V=I \times R$ , B)  $I=V \times R$ , C)  $R=V \times I$ , D)  $V=I/R$
30. In LED bulb, which transformer is used to reduce the voltage, at the output of the rectifier..  
 A) Step down, B) Step up, C) Amplifier, D) None

-----Best Luck-----



## Shankarlal Khandelwal Arts, Science &amp; Commerce College, Akola

## • ACTIVITY •

Academic / Extension / Social / Research / Co-curricular / Guest Lecture / Educational Tour &amp; Visit / Interdisciplinary / Entrepreneurship / Innovative / Workshops / Creative

Date: 09/05/2022

Faculty: Science

Deptt. Physics

Committee: Career Khetor.

Name of the activity & Name of the Guest/Speaker/Judge/Resource person	Aims & Objectives of the activity	Number of beneficiaries	Outcomes of the activity	Remark
Quiz/MCQ Test Dr. H.J. Kharat Prof. D.P. Nachare	1. To evaluate the overall student Performance 2. To evaluate the Problem Solving Skill.	48	1) Student understood the concept 2) Students related the Activity to their concepts. 3) Can design the ckt. 4) Can apply skill for designing & explaining the circuit.	

Sr. No.	Name of the Student	Class	Signature
1	Manisha Anand pajari	B.Sc III	
2	Manisha Pavan Ambekar	B.Sc III	
3	Mukta Pankar	B.Sc III	
4	Vaishnavi Prashant Tiche	B.Sc III	
5	Achal Dnyaneshwar Dorkar	B.Sc III	
6	Ashwini Vinod Ghatole	B.Sc III	
7	Pritee Dalalddhan Dhole	B.Sc III	
8	prachi Ganesh Aghadate	B.Sc-III	
9	Sneha Devidas Dhore	B.Sc III	
10	Teuphi panjab Rao Tetkar	B.Sc III	
11	Vaishnavi Ramneshwar Ambekar	B.Sc III	
12	Gauri Rajesh Karkare	B.Sc III	
13	Rutika Manoj Aliwankar	B.Sc III	
14	Sarita Shankar Mahalle	B.Sc III	
15	Roshani Ramdas Tekade	B.Sc III	
16	Pranali Ravindra Gihumre	B.Sc III	
17	Datta Shankarrao Chandurkar	B.Sc II	
18	Saurabh S. Kave	B.Sc II	
19	Gouravdhan G. Sopkar	B.Sc III	
20	Sumit Pradip Tikar	B.Sc II	



Sr. No.	Name of the Student	Class	Signature
21)	Prathmesh V. Mahajan	BSC-II	P. Mahajan
22)	Chaitanya S. Khawar	BSC-II	SK
23)	Aniket Jyotendra Kapate	BSC-III	Aniket
24)	Harish P. Khosap	BSC-III	Harish
25)	Nikita M. Gade	BSC III	Nikita
26)	Krusha K. Shah	BSC III	K. Shah
27)	Asha G. Motangi	BSC III	A. Motangi
28)	Nishika Sunil Huzpade	BSC III	Nishika
29)	Sanjoma Sanjay Gadhekar	BSC II	S. Gadhekar
30)	Vaishnavi Prakash Shelke	BSC III	V. Shelke
31)	Vaishnavi Nandkishor Chendane	BSC III	V. Chendane
32)	Kartik S. Pawar	BSC III	K. Pawar
33)	Sakshi Kailas Wankhede	BSC III	S. Wankhede
34)	Pranali Ravindra Ghatge	BSC III	P. Ghatge
35)	Nikita Shivnath Gayakwad	BSC III	N. S. Gayakwad
36)	Shubham Arun Raut	BSC II	S. Raut
37)	Rushikesh Vijay. More	BSC II	R. V. More
38)	Gauri Vishwasrao Wadattkar	BSC II	G. Wadattkar
40)	Gravli Vittal Patekhede	BSC II	G. Patekhede
41)	Rohit Sunil Khanduse	-II-	R. Khanduse
42)	Grayatel Sanjay Khadson	-II-	G. Khadson
43)	Sakshi Ramesh. Alashi	BSC II	S. Alashi
44)	Putuja Samadhan Jane	BSC III	P. Jane
45)	Aanchal Manish Wankhede	BSC III	A. Wankhede
46)			
47)			
48)			

Dr. S. K. Desai

Dr. H. J. Khosap




**Shankar Arts, Science and Commerce College, Akola (MS)**


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 Department of Physics & Career Katta  
 In Collaboration with  
 ABS Foundation, Akola  
 5<sup>th</sup> to 9<sup>th</sup> May 2022

<b>Resource Person</b> <b>Prof. Durga Nachane</b> Director, ABS Foundation Akola	<b>President</b> <b>Dr. J. M. Saboo</b> Principal, SRC, Akola
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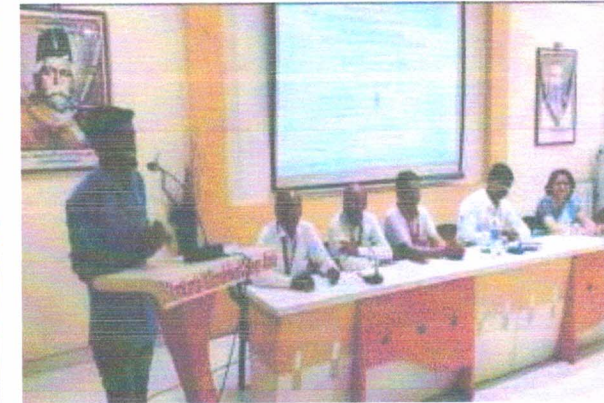
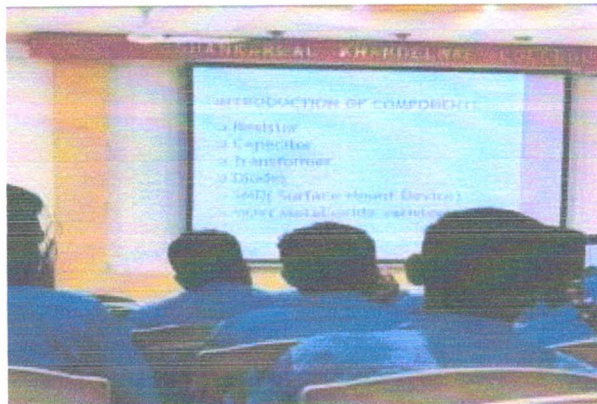
**Organizing Committee**

<b>Prof. R.K. Shirsat</b> Co-Coordinator	<b>Dr. V. D. Mane</b> Coordinator	<b>Dr. H. I. Kharat</b> Coordinator	<b>Dr. S.K. Devade</b> HoD, Physics
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Education for Life and Life for Nation











Shankarlal Khandelwal Arts,  
Science and Commerce College, Akola (MS)  
Re-accredited by NAAC with 'A' Grade



## CERTIFICATE

This is to certify that **Dr. Sanjay Kashmath** Provide of **Shankarlal Khandelwal College, Akola** has successfully completed 5 days skill based certificate course on 'Designing and Repairing of LED Bulb' organized by the Department of Physics and Career Katta of Shankarlal Khandelwal Arts, Science and Commerce College, Akola in collaboration with ABS Foundation, Akola from 5<sup>th</sup> May to 9<sup>th</sup> May 2022.

**Prof. D. P. Nachane**  
Director,  
ABS Foundation, Akola

**Dr. V. D. Mane**  
Coordinator,  
Career Katta, SKC

**Dr. H. J. Kharat**  
Coordinator,  
Dept. of Physics

**Dr. J. M. Saboo**  
Principal,  
SKC, Akola

Education for Life and Life for Nation

देशोन्नती 11-05-2022  
शंकरलाल खंडेलवाल महाविद्यालयात एलईडी बल्ब बनवण्याचे प्रशिक्षण



देशोन्नती वृत्तसंकलन...

अकोला ■ स्थानिक शंकरलाल खंडेलवाल महाविद्यालयात भौतिकशास्त्र विभाग आणि करिअर कट्टा यांच्या संयुक्त विद्यमाने तसेच एबीएस फाउंडेशन अकोलाच्या सहयोगाने डिझायनिंग अँड रिपेयरिंग ऑफ एलईडी बल्ब या प्रमाणपत्र अभ्यासक्रमाचे पाच दिवसीय प्रशिक्षण संपन्न झाले. या प्रशिक्षणाच्या उद्घाटनाच्या वेळी अध्यक्ष म्हणून खंडेलवाल महाविद्यालयाचे प्राचार्य डॉ. जे.एम. सामू उपस्थित होते. कौशल्य विकासालाच जीवनामध्ये महत्त्व, याचे विद्यार्थ्यांना मार्गदर्शन केले. या कारलाबधीत घेतलेल्या कौशल्य आधारित पाच दिवसीय प्रमाणपत्र अभ्यासक्रमाकरिता रिसोर्स पर्सन व

मुख्य प्रशिक्षक म्हणून एबीएस फाउंडेशन अकोलाच्या संचालिका प्रा. दुर्गा नाचणे उपस्थित होत्या. त्यांच्यासोबत प्रा. ओजसिनी देशमुख व प्रा. मेधा तिजारे यांनी सहभागी विद्यार्थ्यांना एलईडी बल्ब बनवणे व दुरुस्ती करणे या विषयाचे प्रशिक्षण दिले. पत्रास विद्यार्थ्यांना प्रशिक्षण पूर्ण केल्याचे प्रमाणपत्र देण्यात आले. या प्रशिक्षणाचे आयोजन, उद्घाटन आणि समारोप कार्यक्रमाच्या यशस्वीतेकरिता प्रशिक्षण वर्गाचे समन्वयक डॉ. हरिदास खरात तसेच करिअर कट्टाचे समन्वयक डॉ. विवेक माने, भौतिकशास्त्र विभाग प्रमुख डॉ. संजय देवडे, सहसमन्वयक प्रा. रोहन शिरसाद, डॉ. प्रफुल्ल धुगे, विराज भगत, गणेश उपाध्याय व विद्यार्थ्यांचे सहकार्य लाभले.

To,  
The Principal,  
Shankarlal Khandelwal Arts,  
Science and Commerce College, Akola

Dear Sir,

It is a matter of great privilege for me to conduct 5 days Skill based Certificate course on 'Designing and Repairing of LED Bulb' from 5<sup>th</sup> May to 9<sup>th</sup> May, 2022 in the Shankarlal Khandelwal Arts, Science and Commerce College, Akola (MS).

I would like to express my sincere gratitude for inviting me as a Resource Person in your reputed institution. I congratulate you for organising 5 days' workshop cum add-on course for B.Sc. Students in your nice campus. Sincere gratitude for the honorarium which I received as a cheque of Bank of Maharashtra of Rs. 12500/- with no.004131 on 18<sup>th</sup> May 2022. Looking forward to have association with you in future as well.

Thanks,

With Regard's,

Sincerely Yours,

**Prof. Durga P Nachane,**  
ABS Foundation, Akola

**Dr H J Kharat**  
Coordinator

**Dr SK Devade**  
HoD, Physics

**Dr J M Saboo**  
Principal  
PRINCIPAL  
Shankarlal Khandelwal Arts,  
Science & Commerce College,  
AKOLA (M.S.)