

**Andhra Christian college
GUNTUR
DEPARTMENT OF PHYSICS**

Date: 26-07-2022

NOTICE

It is Notified for All concerned that Andhra Christian College, Guntur, is going to start a Certificate course on “**LED BULB ASSEMBLING, USAGE & APPLICATIONS**” very soon for 1stB.Sc, 2ndB.Sc & 3rdB.Sc students for their benefits in the near future.

The last date of enrolment is: 31st July, 2022

Course Coordinator: **Dr. P.M.VINAYA TEJ**, Lecturer, Department of Physics

Note:

1. The course is free of cost and the successful candidates will be issued certificates by college which will help them in future.
2. Admission is on First come First Serve Basis. Number of seats is limited.


Head of the Department
(Department of physics)
Dr. M. RATNA RAJU
M.Sc (Tech), Ph.D, M.Tech
Dr. M. RATNA RAJU
Head of the Dept. of
Physics & Computer Sciences
Warden, Wolf Hall Hostel,
ANDHRA CHRISTIAN COLLEGE
GUNTUR-522 001., A.P.


Principal
PRINCIPAL
Andhra Christian College
GUNTUR.

CERTIFICATE COURSE 2022-23

Department Conducts a Certificate course on "LED BULB ASSEMBLING, USAGE AND APPLICATIONS". The Duration of the Course is 30 hours. This course will provide the students an idea of basics of LED bulbs and practical sessions on assembling and service of LED bulbs.

SYLLABUS

MODULE I

10 hours

Diodes- basic concepts, Biasing-forward bias and reverse bias, Introduction to LEDs, Semiconductor LEDs- How do they Work, LED's basic theory, LED Voltage and current, Advantages and disadvantages of LED

MODULE II

10 hours

Multicolour LEDs, White LED, Physics of White LED, White LED no heat, Blue LED- History of Revolutions, LEDs Lighting and Potential for energy savings, Applications of LEDs- Power indicator, seven segment display, why LED lights so good, Organic LEDs

MODULE III – Practical Session

10 hours

How to assemble LED bulbs, Discussion of the circuits, Fabrication of the LED bulbs

Text book for study

1. Principles of Electronics- V.K Metha- S. Chand Publication
2. Principles and Applications of Organic Light Emitting Diodes (OLEDs)- Thejo Kalyani, Hendrik Swart and S.J. Dhoble-Wiley Publication
3. Understanding LED Illumination – M. Nisa Khan
4. Integrated Electronics- Jacob Millman, Christos Halkias, Chetan D. Parikh- second edition

contact@mtcc.ac.in

Andhra Christian College, Guntur

Department of Physics

List of Students Attended for the Add-on Course

01-08-22 18-08-22
Date: 2022 to 2023

Class: I, II, and III B. Sc (M. P.C. and M. P. Cs)

S. No.	Class No	Name of the Students	Class	Signature
1.	602.	K. Hemath	1 st B.Sc	K. Hemath
2.	603.	M. Ravi Teja	1 st B.Sc	M. Ravi Teja
3.	605.	S. Rani	1 st B.Sc	S. Rani
4.	609.	M. Keerthi	1 st B.Sc	M. Keerthi
5.	612.	J. Hareela	1 st B.Sc	J. Hareela
6.	613.	P. Madhavi	1 st B.Sc	P. Madhavi
7.	614.	K. Sailaja	1 st B.Sc	K. Sailaja
8.	604.	Y. Naga Bhargav	2 nd B.Sc	Y. Naga Bhargav
9.	606.	SK. Naseema	2 nd B.Sc	SK. Naseema
10.	612.	P. Suguna	2 nd B.Sc	P. Suguna
11.	614.	K. Charan	2 nd B.Sc	K. Charan
12.	617.	B. prasanna Babu	2 nd B.Sc	B. Prasanna Babu
13.	601.	B. shyam Kumar	3 rd B.Sc	B. Shyam Kumar
14.	604.	B. Nareesh	3 rd B.Sc	B. Nareesh
15.	606.	N. Gopi Naik	3 rd B.Sc	N. Gopi Naik
16.	618.	K. Murali	3 rd B.Sc	K. Murali
17.	621.	SK. Meeravali	3 rd B.Sc	SK. Meeravali
18.	624.	P. Raju	3 rd B.Sc	P. Raju
19.	627.	V. Ganesh	3 rd B.Sc	V. Ganesh
20.	628.	T. Anil	3 rd B.Sc	T. Anil

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ADD-ON CERTIFICATE COURSE

DEPARMENT OF PHYSICS

ATTENDANCE REPORT

Academic year: 2022-23

Timings: 3:00 PM to 5:00 PM Total hours:30 hours

S No	Class No	Name of the student	1/8/22	2/8/22	3/8/22	4/8/22	5/8/22	6/8/22	8/8/22	9/8/22	10/8/22	11/8/22	12/8/22	13/8/22	14/8/22	17/8/22	18/8/22
1 st B.Sc																	
1	602	K. Hemanth	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	603	M. Ravi Teja	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	605	S. Rani	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	609	M. Keerthi	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	612	J. Haveela	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	613	P. Madhavi	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	614	K. Sailaja	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 nd B.Sc																	
8	604	Y. Naga Bhargav	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	606	Sk. Naseema	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	612	P. Suguna	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11	614	K. Charan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12	617	B. Prasanna Babu	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3 rd B.Sc																	
13	601	B. Shyam Kumar	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14	604	B. Naresh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15	606	N. Gopi Naik	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16	618	K. Murali	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17	621	Sk. Meeravali	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18	624	P. Raju	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19	627	V. Ganesh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	628	T. Anil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

M. Ratna Raju
Dr. M. RATNA RAJU
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DEPARTMENT OF PHYSICS

Academic Year 2022-23

TOPIC - LIGHT EMITTING DIODE

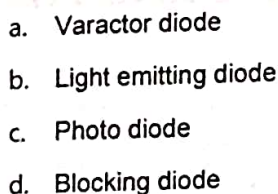
Max Marks : 20 M

Time: 1 Hour

Answer all Questions. Each question carries ONE mark.

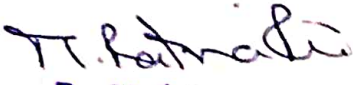
1. In LEDs, light is emitted when _____.
 - a. Electrons recombine with electrons
 - b. Electrons recombine with holes
 - c. Electrons do not recombine
 - d. None of the above
2. Which of the following produce the current when it absorbs photons?
 - a. Transducer
 - b. LED
 - c. Photodiode
 - d. LCD
3. LEDs work on the principle of _____.
 - a. Electromagnetic induction
 - b. Conduction
 - c. Electroluminescence
 - d. Induction
4. State true or false: High warm-up time is needed for LEDs.
 - a. TRUE
 - b. FALSE
5. In local dimming, LEDs are dimmed _____.
 - a. Together
 - b. Independently
6. Aluminium alloys are used to obtain _____ light.
 - a. Red
 - b. Orange
 - c. Yellow
 - d. All of the above

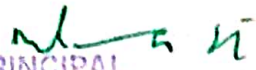
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17. An LED has a rating of 2 V and 10 mA. If it is connected to a 6V battery, the minimum value of series resistance is
- 40 Ω
 - 100 Ω
 - 200 Ω
 - 400 Ω
18. The color of the emitted light from the P-N junction made of GaAsP is
- red or yellow.
 - far infrared.
 - near infrared.
 - ultraviolet.
19. RGB LED consists of _____ LED.
- Two red, one green and one blue
 - One red, two green and one brown
 - One red, one green and one blue
 - two red, two green and two blue
20. As compared to an LED, an LCD has the distinct advantage of
- Extremely low power consumption
 - Providing a silver display
 - Being extremely thin
 - Giving two types of displays

1-b, 2-c, 3-c, 4-b, 5-b, 6-d, 7-a, 8-c, 9-d, 10-b, 11-d, 12-d, 13-b, 14-a, 15-c, 16-b, 17-d, 18-a, 19-c, 20-a


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ADD-ON CERTIFICATE COURSE

DEPARTMENT OF PHYSICS

ATTENDANCE REPORT

COURSE NAME LED BULB ASSEMBLING USAGE & APPLICATION

Academic year: 2022-23

Timings: 3:00 PM to 5:00 PM

Total hours:30 hours

[illegible]

[illegible]

Name																				Sig
36	601	B. shyam kumar	III B.S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B. Shyam kumar
37	602	B. narayan kumar	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B. narayan kumar
38	603	G. naga Raju	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	G. naga Raju
39	604	B. Nareesh	"	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	B. Nareesh
40	605	m. mahendrababu	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	m. mahendrababu
41	606	N. Gopi Naik	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N. Gopi Naik
42	608	N. Prem babu	"	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	N. Prem babu
43	609	S. Revanth Siva	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	S. Revanth Siva
44	610	m. nageswara rao	"	X	X	A	X	X	X	X	X	X	A	X	X	X	X	X	X	m. nageswara rao
45	611	Nithin Chandrasekhar	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Nithin Chandrasekhar
46	613	Sk. Abid Hussain	"	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	Sk. Abid Hussain
47	614	B. Vijaya Varma	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B. Vijaya Varma
48	618	K. murali	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	K. murali
49	620	m. Bhavathi Naik	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	m. Bhavathi Naik
50	621	Sk. Meeravali	"	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	Sk. Meeravali
51	622	T. Jagadeesh	"	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	T. Jagadeesh
52	623	K. Chaitanya	"	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	K. Chaitanya
53	624	P. Raju	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P. Raju
54	625	V. Prem Kumar	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V. Prem Kumar
55	626	R. Sai Kumar	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	R. Sai Kumar
56	627	V. Ganesh	"	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	V. Ganesh
57	628	T. Anil	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	T. Anil
58	1061	P. Thomas	"	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	P. Thomas
59	102	K. Guvavaiah	"	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	K. Guvavaiah
60	1043	G. Kinsingh	"	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	G. Kinsingh

D. D. D. D. D. HOD
Department of Physics
A.C. College, Guntur.

PRINCIPAL
ANDHRA CHRISTIAN COLLEGE
(Day, Evening & P.G)
GUNTUR

“Ye shall know the Truth and the Truth shall set you free”

Andhra Christian College::Guntur

(Day, II Shift & P. G.)

Accredited with A-grade by NAAC



Estd. 1885

CERTIFICATE

This is to certify that Mr. / Ms. K. MURALI

Class IIIrd B.Sc, Regd. No. 618 has participated and successfully completed Certificate Course in “LED BULB ASSEMBLING, USAGE & APPLICATIONS” conducted by the Department of Physics from 01-08-2022 to 18-08-2022 and obtained Grade 18/20 (A)


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