

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
D. M. T.
Dr. M. RATNA RAJU
M.Sc (Tech), Ph.D, M.T.R.P.S
Head of the Dept. of
Physics & Computer Science
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 Peja | 1 st B. Sc | M. Ravi Peja |
| 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. Naresh | 3 rd B. Sc | B. Naresh |
| 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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Andhra Christian College, Guntur
Guntur, West Godavari District,
ANDHRA PRADESH - 526002

Andhra Christian college

Guntur

ADD-ON CERTIFICATE COURSE

DEPARTMENT 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 | $\frac{1}{8/22}$ $\frac{2}{8/22}$ $\frac{3}{8/22}$ $\frac{4}{8}$ $\frac{5}{8}$ $\frac{6}{8}$ $\frac{8}{8}$ $\frac{9}{8}$ $\frac{10}{8}$ $\frac{11}{8}$ $\frac{12}{8}$ $\frac{13}{8}$ $\frac{14}{8}$ $\frac{17}{8}$ $\frac{18/8/22}$ | | | | | | | | | | | | | | |
|---------------------------|----------|---------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1stB.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 |
| 2ndB.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 |
| 3rdB.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 |

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DEPARTMENT OF PHYSICS

Academic Year 2022-23

TOPIC - LIGHT EMITTING DIODE

Max Marks : 20 M

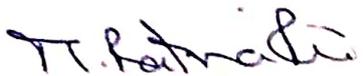
Time: 1 Hour

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

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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