

Andhra Christian college
GUNTUR
DEPARTMENT OF PHYSICS

Date: 12-12-2021

NOTICE

It is Notified for All concerned that Andhra Christian College, Guntur, is going to start a Certificate course on "BASIC ELECTRONICS TRAINING" very soon for 1st B.Sc, 2nd B.Sc & 3rd B.Sc students for their benefits in the near future.

The last date of enrolment is: 13th DEC, 2021

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
Head of the Dept. of
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Warden, Wel -all Hostel,
ANDHRA CHR . . . "LEGE
GUNTU"


Principal
PRINCIPAL
Andhra Christian College
GUNTUR.

CERTIFICATE COURSE 2021-22

Department Conducts a Certificate course on "BASIC ELECTRONICS TRAINING". The Duration of the Course is 30 hours. This course will provide the students an idea of basic idea of electronic components and their uses and applications.

CERTIFICATE COURSE IN BASIC ELECTRONICS TRAINING

SYLLABUS

Module 1: Electronics & Electrical Components Identification

Vacuum tubes – Resistors- Capacitors- Batteries- switches-Diodes – Transistors – Integrated chips – Bread board – voltage supplies- multimeters

Module 2: Uses of Electronics components for basics electronic devices

Use of resistors and capacitors in a circuit- charging and discharging of capacitors- Uses of transistors transistor connections- Uses of diodes- filter circuits- Zener diodes- voltage regulators

Module 3: Cathode Ray Oscilloscope operations

Identification of CRO knobs- Testing of CRO and PROBES- Measurements using CRO- Familiarisation of Function Generators- Operation of Function Generator

Module 4: Skill Development

Soldering of electronic components – full wave & bridge rectifiers – powerpack – manufacturing of LED bulbs

Books For Reference

- 1. Basic Electrical Engineering – V.K Mehta & Rohit Mehta (2006) – S.Chand publishers**
- 2. Electrical Technology – Volume I – B.L.Tereja S.Chand publishers**
- 3. Malvino Electronic Principles (1998) sixth edition – Albert Paul Malvino – Tata Mcgraw Hills publishers**

Andhra Christian College, Guntur

Department of Physics

List of Students Attended for the Add-On Course

Date (2021) to (2022) 15.12.21 to 5.01.2022

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.	601	Sk. Nazzeera	1 st B.sc	Sk. Nazzeera
2.	604	Y. Naga Bhargava	1 st B.sc	Y. Naga Bhargava
3.	607	K. Madhu Kumar	1 st B.sc	K. Madhu Kumar
4.	612	P. Suguna	1 st B.sc	P. Suguna
5.	614	K. Charan	1 st B.sc	K. Charan
6.	616	md. Sultan Sareef	1 st B.sc	md. Sultan Sareef
7.	617	B. Prasanna Babu	1 st B.Sc	B. Prasanna Babu
8.	603	G. Naga Raju	2 nd B.sc	G. Naga Raju
9.	608	N. prema Babu	2 nd B.sc	N. prema Babu
10.	618	K. Murali	2 nd B.sc	K. Murali
11.	624	P. Raju	2 nd B.sc	P. Raju
12.	628	T. Anil	2 nd B.sc	T. Anil
13.	605	K. Msily	3 rd B-sc	K. Msily
14.	607	M. Suresh	3 rd B.sc	M. Suresh
15.	611	K. Siddu	3 rd B.sc	K. Siddu
16.	614	A. Somayya	3 rd B.sc	A. Somayya
17.	620	Sk. Hasan Ali	3 rd B.sc	Sk. Hasan Ali
18.	623	K. Vamsi	3 rd B.sc	K. Vamsi
19.	632	N. Krupakar	3 rd B.sc	N. Krupakar
20.	634	S. Vamsi	3 rd B.sc	S. Vamsi

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Guntur

ADD-ON CERTIFICATE COURSE

DEPARTMENT OF PHYSICS

ATTENDANCE REPORT

Academic year: 2021-22

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

No	Class No	Name of the student	<div style="display: flex; justify-content: space-between; font-size: small;"> 15/1216/1217/1218/1220/1221/1222/1227/1228/1229/1230/1231/123/014/015/01 </div>														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1stB.Sc																	
1	601	SK. Nazeera	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	604	Y. Naga Bhargav	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	607	K. Madhu Kumar	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	612	P. Suguna	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	614	K. Charan	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	616	Md. Sultan Sareef	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	617	B.Prasanna Babu	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2ndB.Sc																	
8	603	G. Naga Raju	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	608	N. Prema Babu	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	618	K. Murali	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
11	624	P. Raju	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12	628	T. Anil	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3rdB.Sc																	
13	605	K. M. Gily	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14	607	M.Suresh	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15	611	K. Siddu	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16	614	A. Somayya	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17	620	Sk. Hasan Ali	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18	623	K. Vamsi	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19	632	N. Krupakar	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	634	S. Vamsi	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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DEPARTMENT OF PHYSICS

Academic Year 2021-22

Topic - BASIC ELECTRONICS TRAINING

Max Marks : 20M

TIME : 1 hour

Answer all Questions. Each question carries **ONE** mark

1. A half wave rectifier has a 200 V rms. source and the step-down transformer has a turns ratio of 4 : 1. What will be the peak voltage across the load ignoring the drop across the diode?
 - a. 70.7 V
 - b. 40 V
 - c. 100 V
 - d. 50 V
2. If a silicon diode is operating in forward bias in a circuit with 12 V supply and 240 Ω resistor, then what will be the voltage drop across the diode?
 - a. 1.5 V
 - b. 6 V
 - c. 12 V
 - d. 0.3 V
 - e. 0.7 V
3. Which of the following is a trivalent doping element?
 - a. Arsenic
 - b. Antimony
 - c. Boron
 - d. Phosphorous
4. A half wave rectifier has a 200 V rms. source and the step-down transformer has a turns ratio of 4 : 1. What will be the peak voltage across the load ignoring the drop across the diode?
 - a. 70.7 V
 - b. 40 V
 - c. 100 V
 - d. 50 V
5. What will be the power dissipation across a silicon diode carrying a current of 50 mA?
 - a. 25 mW
 - b. 50 W
 - c. 35 mW
 - d. 100 mW

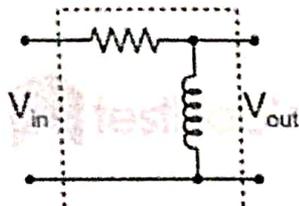
6. Which among the following is a current controlled device?

- a. MOSFET
- b. BJT
- c. IGBT
- d. JFET

7. When a PN junction is forward biased

- a. Depletion region decreases
- b. Minority carriers are not affected
- c. Holes and electrons move away from junction
- d. All of above

8. Identify the filter name given the circuit?

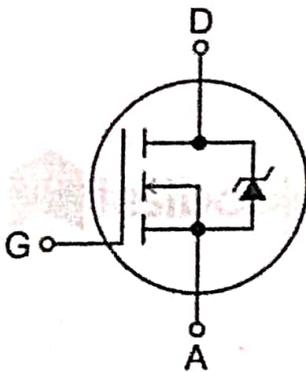


- a. High pass
- b. Band Pass
- c. Low pass
- d. Bandstop

9. For normal operation of NPN transistor:

- a. Emitter Base Junction must be reverse biased and Base-collector junction must be forward biased
- b. Emitter Base Junction must be reverse biased and Base-collector junction must be reverse biased
- c. Emitter Base Junction must be forward biased and Base-collector junction must be forward biased
- d. Emitter-Base Junction must be forward biased and Base-collector junction must be reverse biased

10. A buck converter is used to:
- Exactly double the voltage
 - Stabilize the voltage
 - Step up the voltage
 - Step down the voltage
11. Which of the following is the simplest and cheapest filter circuit in electronics?
- Series Inductor Filter
 - Choke Input LC Filter
 - Capacitor Input Filter
 - RC Filter
12. PIV of a diode indicates
- Peak Instantaneous Voltage
 - Peak Inverse Voltage
 - Peak Inverse value
 - PIV do not apply to diodes
13. The diagram given below represents the standard symbol of which of the following components?



- BJT
- p-Channel MOSFET
- IGBT
- n-Channel MOSFET

14. What is the advantage of online UPS over offline UPS?
- Online UPS provides stable output frequency
 - Online UPS supplies stable power output
 - Online UPS is free from variation and transition problems
 - Online UPS works on single-phase or 3-phase supply
15. A transistor (BJT) works as a variable resistance when?
- Emitter junction is forward biased and collector junction is reverse biased
 - Emitter junction is reverse biased and collector junction is forward biased
 - Emitter junction junction is reverse biased and collector junction is reverse biased
 - Emitter junction is forward biased and collector junction is forward biased
16. What is the purpose of a transistor in electronic circuits?
- To regulate voltage
 - To store data
 - To filter noise
 - To amplify or switch electronic signals
17. Which type of semiconductor device acts as a one-way valve for electric current?
- Diode
 - Inductor
 - Transistor
 - Capacitor
18. What is the purpose of a transistor in electronic circuits?
- To filter noise
 - To amplify or switch electronic signals
 - To regulate voltage
 - To store data
19. The fixed resistors restrict the flow of current up to what level?
- Variable range
 - Any range
 - Certain level
 - Infinite level

20. Capacitance can be defined as the ratio of the electric charge on each conductor to what between them?
- a. Potential difference
 - b. Electric difference
 - c. Potential energy
 - d. Voltage difference

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

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