

**Value added
Course
2019-20**

**CMS
COLLEGE
KOTTAYAM
(AUTONOMOUS)**



Electronics & Maintenance of Home Appliances



- ***Offered to I BSc Students***
- ***A 36 hour certification Course***
- ***Credits offered: 2***

Highlights:

Understand basic electronic components

How to safe handle electrical equipments

How to maintain and rectify their faults

Course
Coordinator :
Dr. Thejal
Abraham

email: thejal
@cmscollege.ac.in



Course	Details		
Code			
Title	Electronics and maintenance of Home Appliances		
Degree	B.Sc.		
Branch(s)	Physics		
Year/Semester	-		
Type	Add On Course		
Credits	2	Total hours	36

CO No.	<i>Expected Course Outcomes</i> <i>Upon completion of this course, the students will be able to:</i>	Cognitive Level	PSO No.
1	After the completion of this course students will be able to use electrical appliances safely and could avoid accidents	U	3
2	After the completion of this course, students will be able to identify the faults and rectify simple electrical tools like electrical iron.	Ap	3

PSO-Program Specific outcome; CO-Course Outcome; Cognitive Level: R-Remember; U-Understanding; Ap-Apply; An-Analyze; E-Evaluate; C-Create.

Module	Course Description	Hrs	CO.No.
1.1	Electric Charge, Voltage, Electric Current, Ohm's Law, Electric Potential,	1	1
1.2	Cell, Serial and Parallel Circuit, their effect on Voltage and current	1	1
1.3	Transformer, Use and Operation	1	1
1.4	Types of Electric Connections and switches	1	2
1.5	Active and Passive Components, Resistors, Capacitors and Inductors , Their identification, types and application	1	1
1.6	Semiconducting Devices: Diodes, its type, characteristics and applications	1	1
1.7	Transistors, Integrated Circuits, Study of a transistor	1	1
	Practical	4	
2.1	Soldering Iron, Soldering wire, Soldering Flux, Soldering method, Zero defect soldering	1	2
2.2	Desoldering pump, Temperature controlled soldering station	1	2

2.3	Screw Driver Set ,Tweezers, Different Types of Tweezers	1	1
2.4	Nose Pliers, Wire Cutter, Hot air gun, Liquid solder pest, Magnifying Lamp and Measuring Tools, Brush	1	1
2.5	Nipper, Test and Measurement Equipment, Multimeter Operation etc.	1	1
2.6	Electrical fans working principles, Type and structure of fans,	1	2
2.7	Describe parts of fans motors, Perform stator side faults	1	2
2.8	Perform measurement of electrical characteristics, Demonstrate fans machine operations	1	2
	Practical	6	
3.1	Iron working principles, Type and structure of iron, Heating element set Perform element faults	1	1
3.2	Measurement of electrical characteristics	2	2
3.3	Iron Heating principals of electrical elements	2	2
	Practical	6	

Text Books for Reference

1. S.K. Sharotri, "Preventive Maintenance of Electrical Apparatus" Katson Publishing House Ludhiana
2. Philip Kiamah," Electrical Equipment Handbook: Troubleshooting and Maintenance", McGrawHill
3. K.B. Bhatia, "Study of Electrical Appliances and Devices", Khanna Publishers Focal
4. R.S. Sedha, "Textbook Of Applied Electronics", S chand Publishers

Theory: 20 hr

Practical: 16 hrs

Evaluation method: Objective method of evaluation is employed

Value Added Course

Electronics and Maintenance of Home Appliances

B. Sc Physics I year (2019-20)

20th November 2019

Day 3

Sl. No.	UPRN	Name of Candidate	Signature		
			Session 1 (9.00 am-11 am)	Session 2 (11.15 am-1.15pm)	Session 3 (2.00 pm-4.00pm)
1	191107101	ANAGHA A LAL			
2	191107102	ANANYA PRAKASH			
3	191107103	ARAVIND P J			
4	191107104	ASWATHY BOSE			
5	191107105	ASWIN V SABU			
6	191107106	BHADRA G			
7	191107107	DEVANARAYANAN			
8	191107108	JINCY SUSAN JOHN			
9	191107109	K R KRISHNAPRIYA			
10	191107110	NANDANA BIJU			
11	191107111	NIMISHA SUSAN JACOB			
12	191107112	NISHANTH B			
13	191107113	POOJA RAJ			
14	191107114	SEBIN K BINU			
15	191107115	SIDHARTH S			
16	191107116	AMRUTHA M SABU			
17	191107117	ANAGHA T B			
18	191107118	ANANDAKRISHNAN S			
19	191107119	ASWIN M T			
20	191107120	ELIZABETH SANTHOSH			
21	191107121	JANAKI S			
22	191107122	JESSIN-JOLLY SEBASTIAN			
23	191107123	LAKSHMI SURESH			
24	191107124	LEKSHMI KESAV			
25	191107125	LINETT ANN SHAJI			
26	191107126	MEGHANA M R			
27	191107127	NANDANA B			
28	191107128	NAVEEN S			
29	191107129	NAVEEN THOMAS VARGHESE			
30	191107130	NEERAJA R NAIR			
31	191107131	ROHITH V R			
32	191107132	S AJMAL			
33	191107133	SANDRA SEBY			
34	191107134	SIDHARTH S NAIR			
35	191107135	SREEDEVI K M			
36	191107136	SREELAKSHMI M J			
37	191107137	TONY THOMAS			
Subject expert Dr. Ruena K. Elizabeth John					
Course Co-ordinator Dr. Theyal Abinal					



HEAD OF THE DEPARTMENT OF PHYSICS
C.M.S. COLLEGE, KOTTAYAM
KERALA, INDIA

Electronics and Maintenance of Home Appliances

B. Sc Physics I year (2019-20)

19th November 2019 Day 2

Sl No.	UPRN	Name of Candidate	Signature		
			Session 1 (9.00 am-11am)	Session 2 (11.15 am-1.15pm)	Session 3 (2.00 pm-4.00pm)
1	191107101	ANAGHA A LAL			
2	191107102	ANANYA PRAKASH			
3	191107103	ARAVIND P J			
4	191107104	ASWATHY BOSE			
5	191107105	ASWIN V SABU			
6	191107106	BHADRA G			
7	191107107	DEVANARAYANAN			
8	191107108	JINCY SUSAN JOHN			
9	191107109	K R KRISHNAPRIYA			
10	191107110	NANDANA BIJU			
11	191107111	NIMISHA SUSAN JACOB			
12	191107112	NISHANTH B			
13	191107113	POOJA RAJ			
14	191107114	SEBIN K BINU			
15	191107115	SIDHARTH S			
16	191107116	AMRUTHA M SABU			
17	191107117	ANAGHA T B			
18	191107118	ANANDAKRISHNAN S			
19	191107119	ASWIN M T			
20	191107120	ELIZABETH SANTHOSH			
21	191107121	JANAKI S			
22	191107122	JESSIN JOLLY			
23	191107123	SEBASTIAN			
24	191107124	LAKSHMI SURESH			
25	191107125	LEKSHMI KESAV			
26	191107126	LINETT ANN SHAJI			
27	191107127	MEGHANA M R			
28	191107128	NANDANA B			
29	191107129	NAVEEN THOMAS			
30	191107130	VARGHESE			
31	191107131	NEERAJA R NAIR			
32	191107132	ROHITH V R			
33	191107133	S AJMAL			
34	191107134	SANDRA SEBY			
35	191107135	SIDHARTH S NAIR			
36	191107136	SREEDEVI K M			
37	191107137	SREELAKSHMI M J			
38	191107138	TONY THOMAS			
Subject expert Dr Renu Elizabeth John					
Course Co-ordinator Dr Theja Abraham					

Value Added Course

Electronics and Maintenance of Home Appliances

B. Sc Physics I year (2019-20)

18th November 2019

Day 1

Sl. No.	UPRN	Name of Candidate	Signature		
			Session 1 (9.00 am-11am)	Session 2 (11.15 am-1.15pm)	Session 3 (2.00 pm-4.00pm)
1	191107101	ANAGHA A LAL 37			
2	191107102	ANANYA PRAKASH 37			
3	191107103	ARAVIND P J 34			
4	191107104	ASWATHY BOSE 37			
5	191107105	ASWIN V SABU 37			
6	191107106	BHADRA G 39			
7	191107107	DEVANARAYANAN 34			
8	191107108	HNCY-SUSANJOHN			
9	191107109	K R KRISHNAPRIYA 39			
10	191107110	NANDANA BIJU 34			
11	191107111	NIMISHA SUSAN JACOB 39			
12	191107112	NISHANTH B 32			
13	191107113	POOJA RAJ 29			
14	191107114	SEBIN K BINU 37			
15	191107115	SIDHARTH S 34			
16	191107116	AMRUTHA M SABU 39			
17	191107117	ANAGHA T B 34			
18	191107118	ANANDAKRISHNAN S 21			
19	191107119	ASWIN M T 28			
20	191107120	ELIZABETH SANTHOSH 29			
21	191107121	JANAKI S 40			
22	191107122	JESSIN JOLLY SEBASTIAN			
23	191107123	LAKSHMI SURESH 39			
24	191107124	LEKSHMI KESAV 40			
25	191107125	LINETT ANN SHAJI 38			
26	191107126	MEGHANA M R 35			
27	191107127	NANDANA B 30			
28	191107128	NAVEEN S 15			
29	191107129	NAVEEN THOMAS VARGHESE			
30	191107130	NEERAJA R NAIR			
31	191107131	ROHITH V R 34			
32	191107132	S AJMAL 34			
33	191107133	SANDRA SEBY 35			
34	191107134	SIDHARTH S NAIR 40			
35	191107135	SREEDEVI K M			
36	191107136	SREELAKSHMI M J 39			
37	191107137	TONY THOMAS 40			
Subject expert Dr Renu Elizabeth John.					
Course Co-ordinator Dr Theja Abraham					

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C.M.S. COLLEGE, KOTTAYAM
KERALA, INDIA



**Department of Physics
CMS College Kottayam**

Report Of Value Added Course

Electronics and Maintenance of Home Appliances

Introduction

The Department of Physics, CMS College kottayam conducted an Add On Course on "Electronics and Maintenance of Home Appliances" from 14th November 2019 to 21st November 2019.

Learning about electronics and the maintenance of home appliances can be beneficial in many aspects. This will help us to use appliances cost effectively, will be effective in preventing accidents. Knowing how to fix problems regarding the appliance will help you to be self-sufficient and empowered. It will help to minimize the usage of energy and will open doors of career opportunities.

Objective

The objective of the course is to train students in order to use electrical appliances safely, avoiding accidents. They will be able to identify the faults and rectify simple electrical tools such as an electrical iron.

Method

The course was imparted through lectures (18 hours) and practical lab sessions (18 hours). 36 students from II nd Semester BSc Physics have attended the course. The evaluation of the study is done using proctored online test containing objective type questions.

Result

The course provided an opportunity for students to understand the fundamentals of electronics and its applications in our day-to-day life.

Course Coordinator: Dr. Thejal Abraham, Assistant Professor, Department of Physics



A handwritten signature in blue ink, appearing to be "Thejal Abraham", with a horizontal line extending to the right.

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