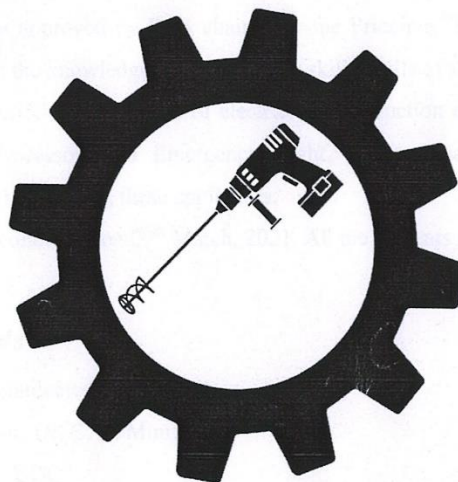


**MAHATMA GANDHI ARTS, SCIENCE & LATE N.P. COMMERCE COLLEGE,  
ARMORI.**

**REPORT OF**  
**CERTIFICATE COURSE IN MAINTENANCE OF**  
**ELECTRICAL HOME APPLIANCES**

**Conducted From 15<sup>th</sup> February, 2021 to 03<sup>rd</sup> March, 2021**



**Submitted By**

**Dr. C. D. Mungmode**

**(Course Coordinator)**

MAHATMA GANDHI ARTS, SCIENCE & LATE N.P. COMMERCE  
COLLEGE, ARMORI.

CERTIFICATE COURSE IN MAINTENANCE OF ELECTRICAL  
HOME APPLIANCES

- Objectives :- 1. To train students to maintain electrical home appliances  
2. To train students to repair electrical home appliances

A certificate course of 44 hours in Maintenance of Electrical Home Appliances was conducted during the session 2020 - 2021. The duration of the course was reduced due to Covid-19 pandemic which was approved by BOS chaired by the Principal. This course was designed & Conducted to impart the knowledge / to develop the skill / skills of students.

The students were introduced to basics of electricity, construction and working of Cooler, Fan, Mixer and Food Processor, and Emergency Light. Students are also made aware about maintaining and troubleshooting these appliances.

The final exam was conducted on 29<sup>th</sup> March, 2021. All the students get passed in the course.

❖ **Course Details**

- This course was conducted free of Cost.  
➤ Course coordinator: Dr. C. D. Mungmode  
➤ Course Scheme :- UGC  
➤ No. of students benefited: 12  
➤ Resource Persons 1. Mr. Baliram Giradkar

❖ **Course Outcomes :-**

1. Job Opportunities in different sectors.  
2. Business / Self-employment Opportunities.  
3. Scope for further studies.



Date: 13/09/2021  
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Dr. C. D. Mungmode  
(Course Coordinator)

## Maintenance and Repair of Domestic Appliances

Theory

### Unit I Electric Mixer and food processor

- 1.1 Introduction to electric mixture and food processor
- 1.2 List of main parts of mixer and food processor
- a) Motor
  - b) Switch
  - c) Base unit (Body)
  - d) Supply cord
  - e) Interlock Lever
  - f) Overload Circuit breaker
  - g) Cupler
  - h) Indicators
  - i) Connector strip
  - j) Accessories of mixer
    - 1) Stainless Steel Jars or Plastic jars
    - 2) Rubber ring
    - 3) Dome
    - 4) Stopper
    - 5) Dry grinding Blade
    - 6) Wet grinding Blade
    - 7) Mincing blade
    - 8) Whipper Blade
    - 9) Spatula
    - 10) Diagram of all parts
- 1.3 Working principle, Circuit diagram and working
- 1.4 Common faults, testing and repairing
- 1) List of common faults their causes and remedies
  - 2) Testing of motor
  - 3) Control switch
  - 4) Overload circuit breaker
  - 5) Supply cord with the help of multimeter and test lamp
- 1.5 Precaution :- Precaution while handing mixer

Practical

- 1) Dismantling and reassembling of electric mixer
- 2) Testing, fault finding, repair and over hauling
- 3) Workshop Visit



  
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Unit - II      **Electrical Fan**

2.1 Introduction of electrical fan

2.2 Types of fans

- a) Table fan                      b) Ceiling fan                      c) Exhaust fan  
d) Pedestal fan                      e) Cabin fan

2.3 Construction :- List of main parts for each fan

- i.e.    a) Motor                      b) Blades                      c) Canopy  
          d) Regulators                      e) Specific part  
          f) Oscillating mechanism                      g) Stand                      h) Down rod  
          i) Capacitor                      j) Base diagram of each parts

2.4 Working principle

- i) Working principles of fan along with circuit diagram and working of fan

2.5 Common faults, list of common faults their causes and remedies

Overhauling and Repairing procedure and , maintenance for all types of fans  
Testing of motor, Capacitor, Regulator with the help of series test lamp and multimeter.

Precautions while handling fans

2.6 Speed control

Speed control of fans

2.7 Installation of exhaust and ceiling fan

- Practical :-    1) Dismantling and reassembling of electric fans  
                  2) Testing, fault finding, and repair of fans



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### III) Room Coolers

#### 3.1 Introduction to room coolers

- a) Exhaust type                      b) Window type                      c) Blower type

#### 3.2 Construction

List of main parts

- a) Motor                      b) Pump                      c) Body  
d) Control switch              e) Cooling pads              f) Water level indicators  
g) Supply chord              h) Diagram of each parts

#### 3.3 Working principle & Working of each type of room cooler along with circuit diagram.

#### 3.4 Common faults, testing and Repairing List of common faults, their causes and remedies.

Testing of motors, Pump, Switch, capacitor with the help of series test lamp or multimeter. Repairing procedure for room cooler to removing the various faults.

#### 3.5 Installation

Installation of room cooler

Precaution while handling room cooler


#### 3.6 Overhauling

Overhauling procedure of room cooler

Practical: - 1) Testing, fault finding and repair of room cooler

2) Workshop Visit



  
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## Unit IV Emergency Light

### 4.1 Introduction

Introduction to emergency light

### 4.2 Working Principle

Working principle of emergency light with circuit diagram

### 4.3 Construction

List of main parts

- |                |                               |                     |
|----------------|-------------------------------|---------------------|
| a) Transformer | b) Rectifier                  | c) Inverter circuit |
| d) Battery     | e) Cabinet                    | f) Operating Switch |
| g) Tube        | h) Reflector ie. Supply chord |                     |

Detailed Description of each part

### 4.4 Circuit operation of Emergency light

### 4.5 Common faults and Repairing

List of common faults their causes and remedies.

Repairing procedure to emergency light for various faults


### 4.6 Precautions

Precautions while handling for emergency light.

### Practical

- 1) Testing, Fault finding and repair of emergency light
- 2) Workshop Visit



  
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## Unit V Inverters

### 5.1 Introduction of Inverters

### 5.2 Construction

List of main parts

Introduction of parts used in inverters.

### 5.3 Working

Working of Inverters

### 5.4 Common faults

List of common faults, their causes and remedies.

### Practical

- 1) testing, fault finding and repair of inverters

\* Industrial Visit



  
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\* List of Books

- 1) Basic Electrical Engineering – M . L. Anwani
- 2) Study of Electric Domestic Appliances – K. B. Bhatia
- 3) Basic Electrical Engineering - P. P. Shah
- 4) Vidyut Shastra (Marathi) - Shyam Pitke
- 5) Domestic Appliances (Marathi) - P. P. Shah
- 6) Vidyut Shastra - P. P. Shah
- 7) Domestic Appliances - Shri. Bobade

\* List of Equipment, tools, Appliances & Machine

- 1) Work bench
  - 2) Ammeter AC & DC (Analog / Digital)
  - 3) Voltmeter (Analog / digital)
  - 4) Wattmeter
  - 5) Ohmmeter
  - 6) Multimeter (Analog/ Digital)
  - 7) Scissors
  - 8) Grinder
  - 9) Files (Flat, Square, Round, Halfround)
  - 10) Wood hand saw
  - 11) Screw Drivers (Various sizes)
  - 12) Ball Pein hammer
  - 13) Pliers (Insulated combinations)
  - 14) Oil can
  - 15) Electrician Knife
  - 16) Connectors
  - 17) Claw hammer
  - 18) Carbon brush
  - 19) Wiring material
  - 20) De Motors
- 
- 1) Potantial Transformer
  - 2) Current transformer
  - I) Visit to Workshop
  - II) Visit to Industry


  
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Certificate Course in Maintenance and Repair of Home Appliances

No.	Name	Month																																																			
		Date																																																			
		Lecture	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	47									
1.	Mr. Pranay R. Meshram		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
2.	Mr. Shubham A. Chimanikar		P	P	P	P	P	P	P	P	P	P	P	P	P	P																																					
3.	Mr. Amit A. Kale		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
4.	Mr. Dnyaneshwar U. Devgijskar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
5.	Mr. Nikhil V. Deshmukh		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																			
6.	Mr. Pranay S. Kamble		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
7.	Mr. Sanket T. Akase		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
8.	Mr. Rohan D. Kasture		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
9.	Mr. Yash A. Kallewar		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																			
10.	Mr. Khushal R. Sidam		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
11.	Mr. Manish G. Fapanwade		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																				
12.	Mr. Ankit V. Talande		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P																																			



  
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 Amori, Dist - Gadchiroli





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**MAHATMA GANDHI ARTS, SCIENCE &**

**LATE NASARUDDINBHAI PANJWANI COMMERCE COLLEGE**

ARMORI, Dist. Gadchiroli (M.S.) 441 208  
Re-accredited by NAAC 'A' with 3.02 CGPA

**Certificate Course in Maintenance of Home Appliances**

**Certificate Issue List**

**(2020 -2021)**

Sr. No.	Name of Students	Class	Signature
1.	Mr. Pranay Raju Meshram	B. Sc. - II	
2.	Mr. Shubham Anmol Chimankar	B. Sc. - II	
3.	Mr. Amit Anandrao Kale	B. Sc. - II	
4.	Mr. Dnyaneshwar Umakant Devgirkar	B. Sc. - III	
5.	Mr. Nikhil Vijay Deshmukh	B. Sc. - III	
6.	Mr. Pranay Sheshrao Kamble	B. Sc. - III	
7.	Mr. Sanket Tejraro Akare	B. Sc. - III	
8.	Mr. Rohan Diwakar Kasture	B. Sc. - III	
9.	Mr. Yash Arun Kallewar	B. Sc. - III	
10.	Mr. Khushal Rushiji Sidam	B. Sc. - III	
11.	Mr. Manish Gajanan Fapanwade	B. Sc. - III	
12.	Mr. Ankit Vinayak Talande	B.Sc. - III	

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**Certificate Course in Maintenance of Home Appliances  
(2020 -2021)**

**Examination Attendance**

Examination Date: 29/03/2021

Sr. No.	Name of Students	Class	Signature
1.	Mr. Pranay Raju Meshram	B. Sc. - II	
2.	Mr. Shubham Anmol Chimankar	B. Sc. - II	
3.	Mr. Amit Anandrao Kale	B. Sc. - II	
4.	Mr. Dnyaneshwar Umakant Devgirkar	B. Sc. - III	
5.	Mr. Nikhil Vijay Deshmukh	B. Sc. - III	
6.	Mr. Pranay Sheshrao Kamble	B. Sc. - III	
7.	Mr. Sanket Tejrao Akare	B. Sc. - III	
8.	Mr. Rohan Diwakar Kasture	B. Sc. - III	
9.	Mr. Yash Arun Kallewar	B. Sc. - III	
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&  
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ARMORI, Distt. GADCHIROLI 441 208

Year - 2020 - 2021

**Certificate**

This is to certify that Mr. / Miss. Amit A. Kale  
successfully completed prescribed "Certificate Course in Maintenance of Home  
Appliances held from 15/02/2021 to 03/03/2021  
under UGC Sponsored Career Oriented Programme.

He/She has secured A grade.

  
(Dr. C.D. Mungmode)  
Co-ordinator

  
Principal