Govt. Degree college Sundipenta

Community service project

Use of electrical home appliances

Submitted by

Sk.Yasmin

1st B.Sc(MPCA) (2nd Semester)

Register Number:21373047018

Under Mentorship of

G.Y.V.Kalyani

Lecturer in Mathematics

Govt. Degree college Sundipenta

DECLARATION

I hereby declare that the project entitled “Community service project” submitted by me to Controller of Examinations Government Degree College in partial fulfilment of the requirement for the award of the Degree of BSc. This is a record of actual project work carried out by me under the guidance of G.Y.V.Kalyani,Lecturer in Mathematics. I further declare that the work reported in this project has not submitted and will not be submitted, either in part or in full, for the award of any degree in this institute or any other institute or university.

_____

Name:

Date:

CERTIFICATE

This is to certify that Shaik.Yasmin studying I Bsc MPCA at **Govt.Degree College, Sundipenta,Srisailam Project** has successfully completed her community service project on Use of electrical home appliances under the guidance of **G.Y.V.Kalyani,Lecturer in mathematics**.

Signature of Mentor Signature of Examiner Signature of the Principal

ACKNOWLEDGEMENT

I wish to express my gratitude to those who extended their valuable cooperation and contribution towards the project

I would like to thank our Principal sir **Dr. P.Hussain Basha** Garu for facilitating the project and providing his guidance throughout the duration of the project.

I would like to express gratitude to my project guide **G.Y.V.Kalyani,Lecurer** in Mathematics for her valuable time and continuous assistance for the successful completion of the project.

I would like to thank the faculty and staff of the institute for their support.

GRADE SHEET

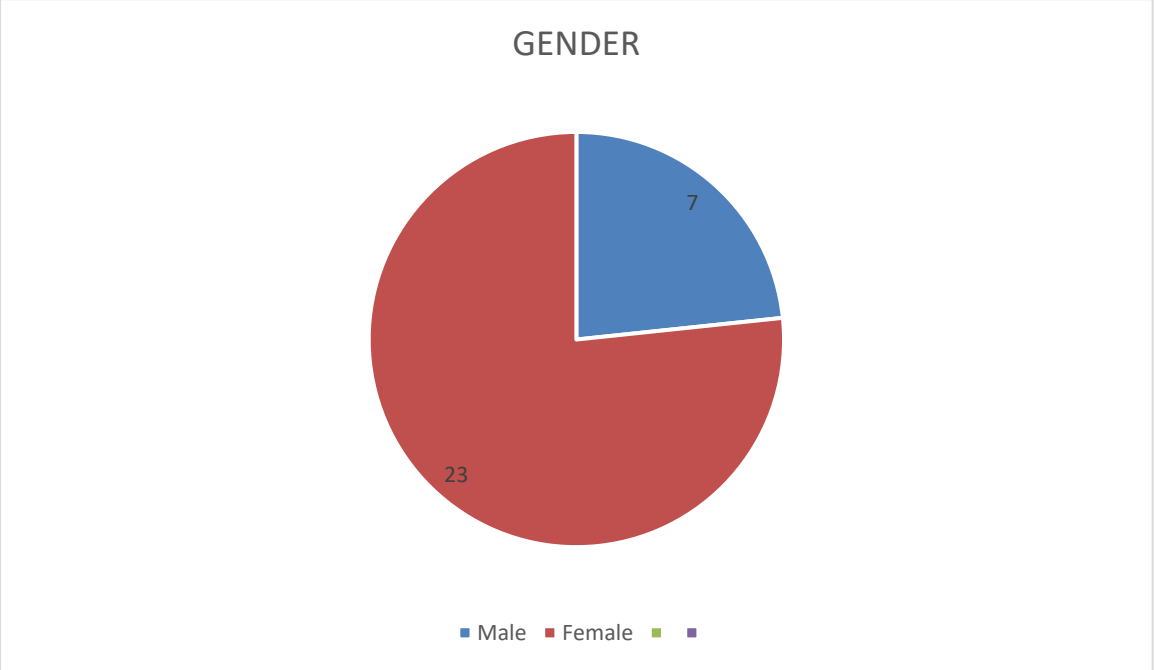
S.No.	Part of work	Marks awarded	
		Max marks	Marks awarded
1.	Awareness on project		
2.	Implementation		
3.	Survey		
4.	Report writing		

SURVEY LOCATION

Location:WardNo-7,Westerncolony,RoadNo-3,Sudipenta,Srisailamproject,Nandyaldistrict.

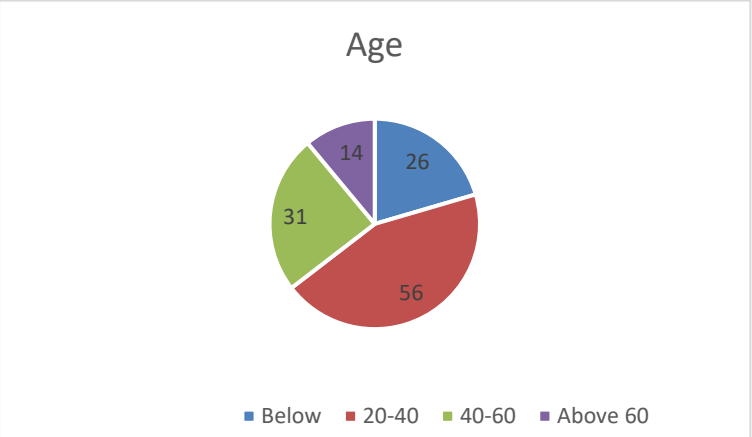
Classification of Respondents based on Gender

GENDER	
Male	**7**
Female	**23**



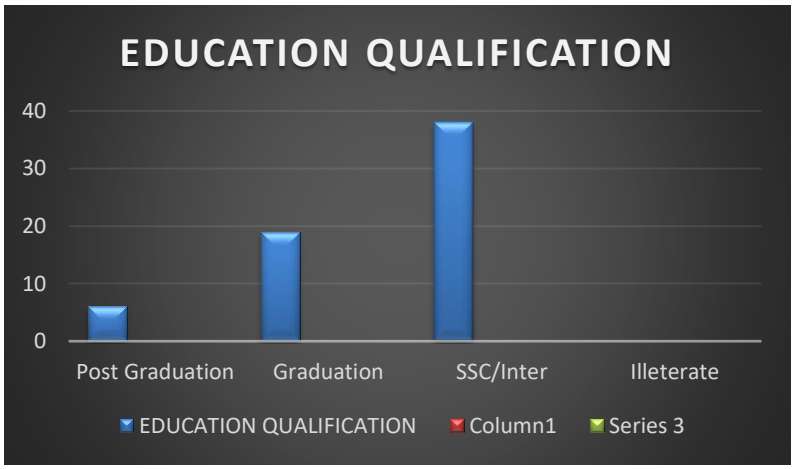
Classification of Respondents based on Age

AGE	
BELOW 20	26
20-40	56
40-60	31
ABOVE 60	14



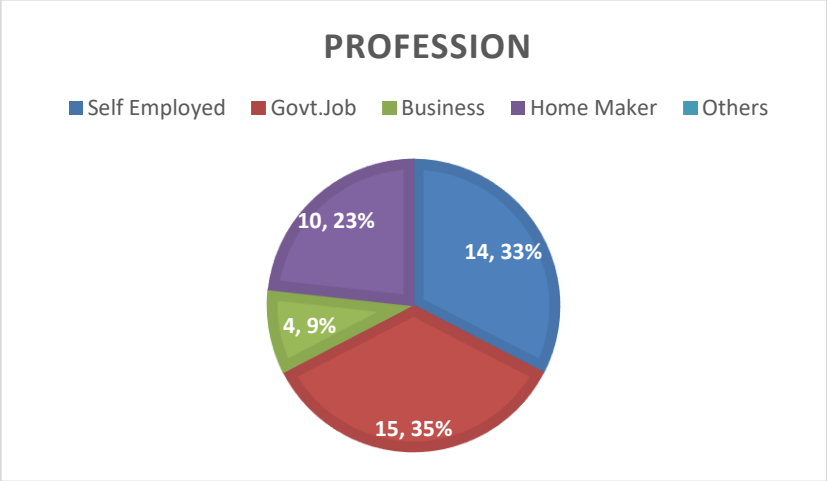
Classification of Respondents based on Education Qualification

EDUCATION QUALIFICATION	
POST GRADUATE	6
GRADUATE	19
SSC/INTER	38
ILLETERATE	0



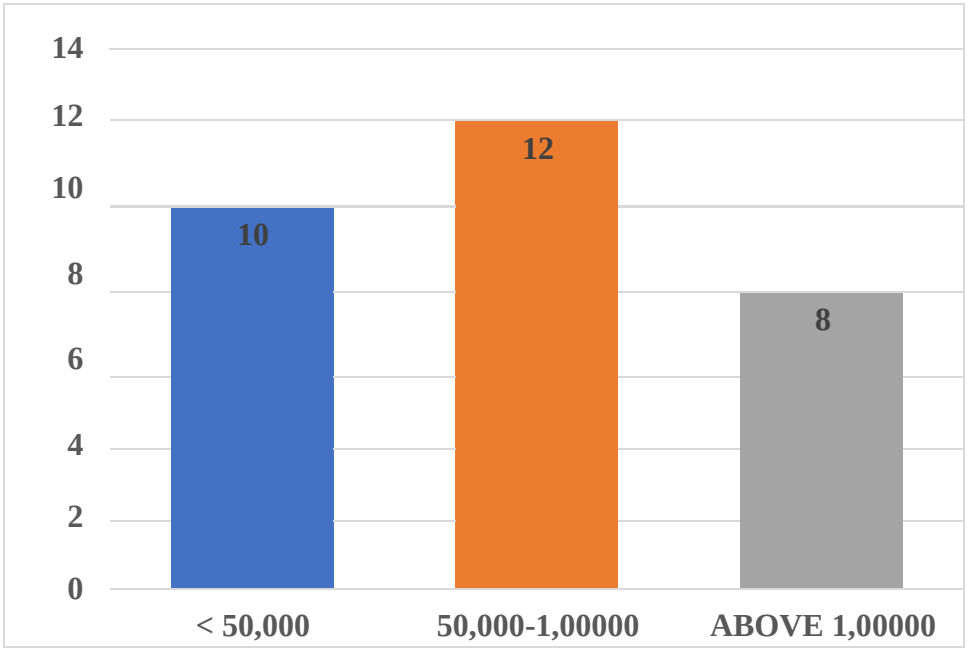
Classification of Respondents based on Profession

PROFESSION	
SELF EMPLOYED	14
GOVT JOB	15
BUSINESS	4
HOME MAKER	10
OTHERS	18

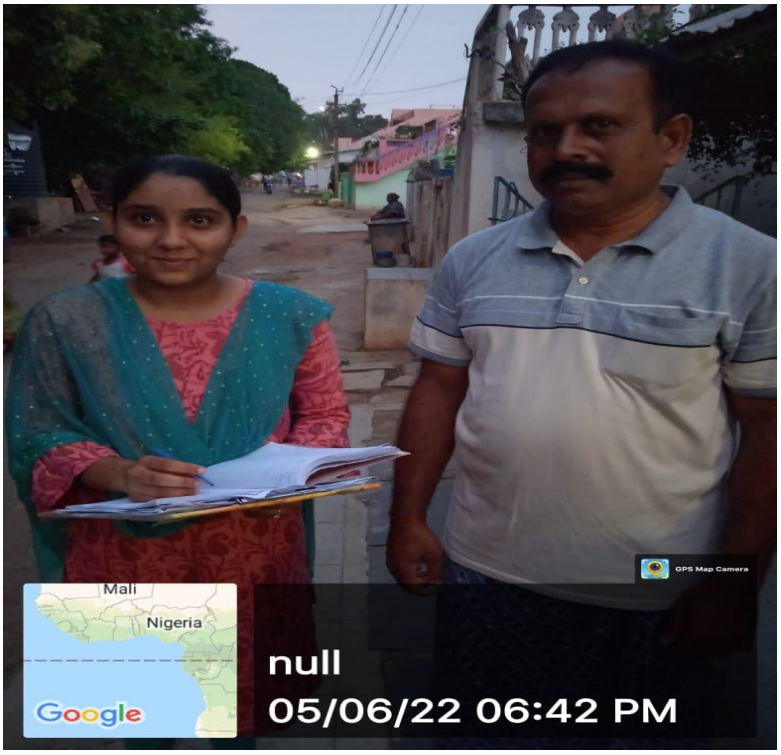


Classification of Respondents based on Income

INCOME	
< 50,000	10
50,000-1,00000	12
ABOVE 1,00000	8



SURVEY PHOTOS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Nigeria
Google
GPS Map Camera
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07/06/22 04:05 PM
FaceApp

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OBJECTIVE OF COMMUNITY SERVICE PROJECT

Community service **provides an individual with the opportunity to become active members of the community and has a lasting, positive impact on society at large**. Community service or volunteerism enables individuals to acquire life skills and knowledge, as well as provide a service to those who need it most.

The objective of community service project is that an individual should be able to understand and describe

- The concept of community service
- The social, public and community responsibilities of the professionals
- The types and concept of volunteer work.
- To understand social conditions of the people.
- To know the economic conditions of the people.
- To create awareness among the people regarding the problem identified.
- To carry on a survey and to analyse the current situation.

INTRODUCTION

My survey area is Sundipenta ,a small village near srisailam and on the right bank of river Krishna .This village has its ow panchayat.This area has a mixture of both low income and middle-class families and very few high income group.This village is located in the mountain range far rom cities in middle of Nallamala forest.The main income source of the people here is from small businesses and many of the people work for daily wages.There are some government employees who work in irrigation department.But many of the people are getting their income from small businesses.Tourism is the main key of income to the people who are living here.Even though the area is so peaceful and pleasant.the lifestyle of the people is very difficult.This place is so close to nature but too far from basic facilities which are needed.So I have chosen to do community service project on the topic Use of electrical home appliances in the locality Ward-no:7,Western Colony,Sundipenta,Srisailam Project ,Nandyal district.

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SCOPE OF STUDY

The study has been conducted based on the responses of the selected respondents in Sundipenta village. Hence, the inferences, findings of the analysis need not hold good totally for the Sundipenta village as a whole if the country at large.

The study was limited to the 35 responses of residents in sundipenta.

METHODOLOGY

Quantitative research is carried out by interviewing the people. In the first week socio economic survey was carried out and problems were identified.People responded me very well.They said their problems . In the second week awareness was brought and suggestions were given regarding the problems identified among the localities. In the third week survey was conducted using questionnaires and in fourth week project report was written.At last I handover my consolidation report to my respective mentor.

Project Specifications

Topic: Use of electrical home appliances

Abstract

Abstract— Electricity is very useful for mankind since its invention. We are using it in our domestic life and Industries for lighting, Heating, Ventilation, Air-Conditioning, Fans, and to drive Pumps, Compressors etc. But it is very important not to get in electricity's way because it can kill. Electrical safety is an important issue for ensuring the safety of employees, users at house and the working environment whether it is through the use of electrical equipment or the safety of the main distribution system. This paper deals with some of causes of electrical accidents and the mitigation techniques therein to save human lives and industrial equipment. Keywords: Safety, Industry, House hold, Appliances, ELCB (Earth Leakage Circuit Breaker)

I. INTRODUCTION: We know the importance of human life and so the safety precautions when working with electricity. Safety must not be compromised and some basic principles need to be followed first. We use electricity for many of the energy services around the house and industries without which we cannot imagine our life on earth as on date. Because of this, it is extremely important to follow certain rules and have minimum safety devices to protect from shocks, fire and electrocution. This page examines these electrical safety devices. Namely, fuses, circuit breakers, and ground fault circuit interrupters. For more details, please go to the main articles. Electricity is one of the most commonly encountered hazards in any facility. Under normal conditions, safety features (engineering controls) built into electrical equipment protect workers from shock. Shock is the flow of electrical current through any portion of the worker's body from an external source. Accidents can occur in which contact with electricity results in serious injury or death. Before going to the safe use of electrical appliances, let us briefly know about the major electrical hazards and their causes.

II. CAUSES OF ELECTRICAL ACCIDENTS: It is known that approximately half of electrical accidents are associated with a work activity according to the International Labour Office. The other half tends to occur at home or during leisure activities. However; this can vary from country-to-country and year-to-year. Electricity is the cause of approximately 5 % of all fatal accidents of workers and for about one percent of all non-fatal. This means that the fatality is relatively high. This is especially true for high voltage accidents. A person gets an electric shock when he becomes part of a circuit. Shock occurs in following ways:

- Contact with both wires
- Contact with one wire and ground

Contact with energized equipment and ground The accidents are often caused by one or more of the following factors:

- Use of inappropriate electrical equipment being too accustomed to the danger
- Lack of awareness of the electrical danger and competence.
- not using personal protective equipment – non-compliance with advice and instructions
- Earth protection fault - most failures of equipment grounds occur, either at the ground contact of the receptacle or in the plug and cable leading to the linepowered equipment.
- faulty safety equipment, for example, faulty ELCB device
- Insulation fault, for example, damaged cable or damaged insulation housing. – Hazards are greater in certain areas, for example in wet areas
- unsuitable or damaged equipment can easily become live and can make its surroundings live, for example, the housing of many electrical equipment for dry conditions have holes and vents for cooling that provide access for spilled conductive fluids and wet parts of the housing can conduct enough electricity to cause these areas to become temporarily live.

- equipment may not only become wet but may be at greater risk of damage because of the potential exposure to shocks or vibrations during transport and to heat, oil, sharp edges, and moving parts during the use Electricity is different from other forms of hazardous energy, because it is both undetectable by human senses and potentially immediately fatal upon contact. Since we use electricity every day and everywhere in our lives, this requires a broad application of specialized equipment construction methods and safe work practices to prevent serious injuries or death. Most accidents happen at the usual consumer voltages of low-voltage distribution installations 230 V AC (against earth) and 415 V AC (between two phases conductors). Low voltage does not mean low hazard. Even contact with extra low

voltage below the limit value of 50 V AC or 110 V DC can cause accidents. In some critical work areas, it may be necessary to limit the voltage to lower than 18 V AC or 60 V DC, for example, in conductive or wet

use of inappropriate electrical equipment

- being too accustomed to the danger
- Lack of awareness of the electrical danger and competence.
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- non-compliance with advice and instructions
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60 V DC, for example, in conductive.

or wet locations with restricted movement.

III. ELECTRICAL HAZARDS: Electricity holds a number of possible hazards all of which have the potential to be fatal for example: – Electric Shock – Electric Burns – Flashover injuries – Fire The risk of injury from electricity is linked to where and how it is used. The primary hazard of working with electricity is electric shock. Twenty five volts can be fatal under certain circumstances. In other circumstances people can suffer serious burns. The voltage normally available at socket outlets and lighting points is 230 volts. Voltage on 3- phase equipment such as electric motors etc. is 415 volts. Electrical shock can be caused by bodily contact between two conductors or between a conductor and earth. All precautions must be aimed at reducing the risk of contact with unprotected conductors of electricity at potentially hazardous voltages. In addition a major cause of fire is poor electrical installations and faulty electrical appliances. Three major ways electric current damages the body are: (1) it harms or interferes with proper functioning of the nervous system and heart; (2) it subjects the body to intense heat; and (3) it causes the muscles to contract and the symptoms may include Skin burns, Weakness, Muscle contraction, Muscular pain, Bone fractures, Headache, Hearing impairment, Cardiac arrest, Respiratory failure and Unconsciousness.

IV. ELECTRICAL EQUIPMENT / APPLIANCES: An electricity consuming device or apparatus (including the cable) that is connected to or capable of being connected to the electrical installation. Electrical appliances can be classified into one of the following categories: – Portable electrical equipment – equipment that is connected to an electrical supply and intended to be moved when in use, e.g. electric arc welder, Vacuum cleaner; – Hand-held – portable equipment that is intended to be held in the hand during normal use and the electrical motor forms an integral part of the equipment, e.g. electric drill, angle grinder (excludes battery operated equipment); – Movable – an appliance that can be moved readily from one place to another by unplugging from a general purpose outlet, but that is not moved during operation, e.g. cathode ray oscilloscope, electronic balance, personal computer, Pedestal Fan. printer, etc. – Fixed/stationary – an appliance which is, in normal use, fastened to a support of otherwise secured in a specific position or is of such size or function as to be difficult or unlikely to be moved from one place to another, e.g. large workshop machinery (lathe, band saw, etc.), oven, refrigerator, Pump motor, Compressor motor etc.

V. SAFE USE OF ELECTRICAL APPLIANCES: Users must ensure that electrical equipment that they use is in a safe condition. If there is any doubt it must not be used. The following general precautions must be applied: 1) Equipment should be visually checked before it is used. Any item with a plug should be checked for: – Is the plug cracked/scorched/rattling? – Is the main cable held by the cable grip (colored wires should not show)? – Is the cable worn/split? – Is the apparatus itself cracked/scorched/rattling? 2) Suspect or faulty equipment must be taken out of use, labeled 'DO NOT USE' and kept secure until examined by a competent person;

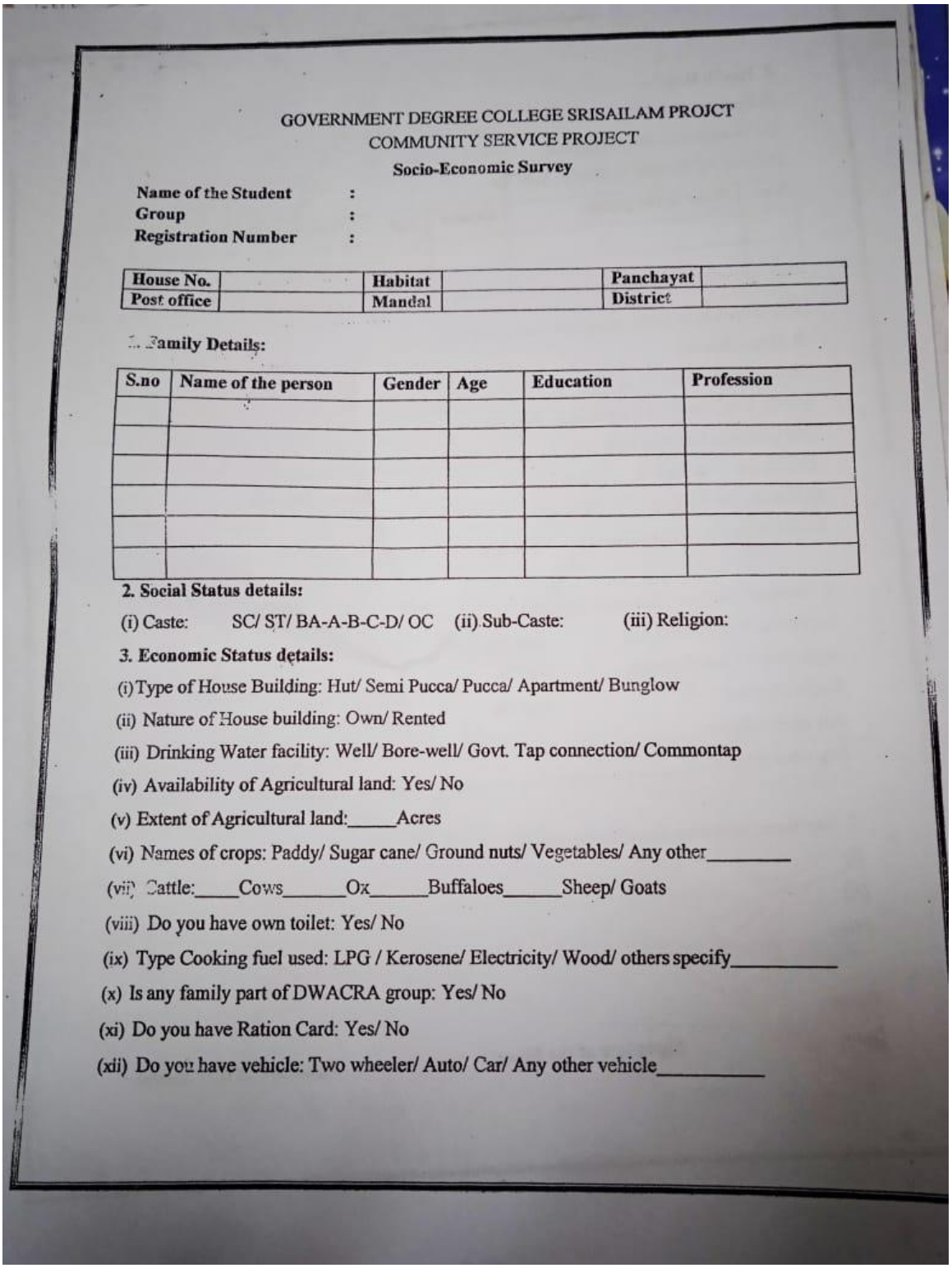
3) Where possible, tools, equipment and power socket outlets should be switched off before plugging in or unplugging;
4) Equipment should be switched off and/or unplugged before cleaning or making adjustments, and when left overnight
; 5) Where required by risk assessment,110 V equipment and extension cables must be used e.g. in areas where equipment will be exposed to weather, Moisture or physical damage. If the equipment is unavailable as a 110 V model, the supply must be controlled by a Residual Current Device (RCD or ELCB);
6) A means of isolation should be readily accessible when using any electrical equipment, including appliances;
7) Manufacturers' or suppliers' instructions must be read and understood before an unfamiliar item of equipment is used for the first time;
8) Equipment must not be plugged into light bulb sockets, or circuits intended for lighting purposes, or circuits intended for emergency use only. Approved multi- way extension leads may be used but care must be taken not to overload the supply socket
. 9) The conditions of use must be safe eg. some items of equipment may have grills, vents or fans or require a surrounding air space to permit adequate passage of air for cooling purposes. Care must be taken to ensure that air cooling is not obstructed eg.due to poor positioning of the equipment;
10) Mains supply cables must not be positioned in a location where they could be mechanically damaged by furniture, trolleys, people walking on them etc. If positioning in a trafficked area is not avoidable, all the cables must be protected with a robust cover and marked to reduce the risk of tripping.
11) Use the appliance only for its intended purpose i.e. If the appliance is for indoor use only, do not use outdoors.
12) Do not immerse the appliance in water unless it is designed for this purpose.
13) Keep hands, fingers, feet, toes and hair away from dangerous moving parts, cutting blades and the like.
14) Do not use electrical appliances in the rain.
15) Make sure you have dry hands when operating an electrical appliance.
16) An appliance may not be intended for use by children or people with an illness or disability without supervision.
17) Young children should not be allowed to play with the appliance.
18) The appliance should be maintained in order to ensure a long, useful life and to protect the operator against

QUESTIONNAIRE

GOVT.DEGREE COLLEGE SUNDIPENTA,SRISAILAM PROJECT.

SURVEY ON USE OF ELECTRICAL HOME APPLIANCES

NAME: _____ REGISTER NUMBER: _____



GOVERNMENT DEGREE COLLEGE SRISAILAM PROJCT
COMMUNITY SERVICE PROJECT
Socio-Economic Survey

Name of the Student :
Group :
Registration Number :

House No.		**Habitat**		**Panchayat**	
Post office		**Mandal**		**District**	

1. Family Details:

S.no	Name of the person	Gender	Age	Education	Profession

2. Social Status details:

(i) Caste: SC/ ST/ BA-A-B-C-D/ OC (ii) Sub-Caste: (iii) Religion:

3. Economic Status details:

(i) Type of House Building: Hut/ Semi Pucca/ Pucca/ Apartment/ Bunglow

(ii) Nature of House building: Own/ Rented

(iii) Drinking Water facility: Well/ Bore-well/ Govt. Tap connection/ Commontap

(iv) Availability of Agricultural land: Yes/ No

(v) Extent of Agricultural land:_____Acres

(vi) Names of crops: Paddy/ Sugar cane/ Ground nuts/ Vegetables/ Any other_____

(vii) Cattle:_____Cows_____Ox_____Buffaloes_____Sheep/ Goats

(viii) Do you have own toilet: Yes/ No

(ix) Type Cooking fuel used: LPG / Kerosene/ Electricity/ Wood/ others specify_____

(x) Is any family part of DWACRA group: Yes/ No

(xi) Do you have Ration Card: Yes/ No

(xii) Do you have vehicle: Two wheeler/ Auto/ Car/ Any other vehicle_____

4. Health Details:

(i) Diseases in family:

(ii) Treatment in which Hospital:

(iii) Any PH Persons in family: Yes/ No

S.no.	Name of the person	Gender	Age	Nature of Disability

(iv) Do you have Govt. Arogyasri Card: Yes/ No

5. Other Details:

(i) Do You have TV: Yes/ No

(ii) Do You have Dish Connection: Yes/ No

(iii) Channels Watched regularly: 1._____ 2._____ 3._____

(iv) Do you have Mobile: Yes/ No Mobile Number:

(v) Do you have Laptop: Yes/ No

(vi) Is internet available at home: Yes/ No

6. Name of the Govt. Schemes received:

Jagananna Vidhya Deevena Yes/ No

Jagananna Vasathi Deevena Yes/ No

Raithu Bharosa Yes/ No

Any other scheme: _____

Any other scheme: _____

7. Any three problems faced in the village:

(i)

(ii)

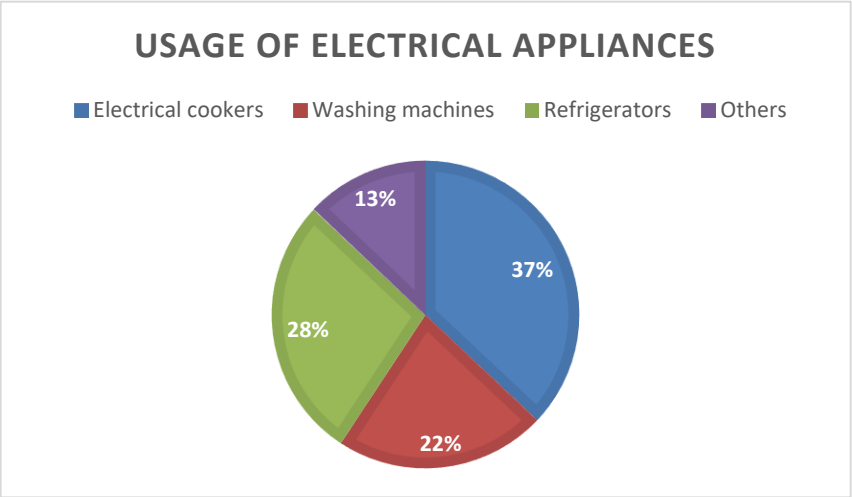
(iii)

Place:

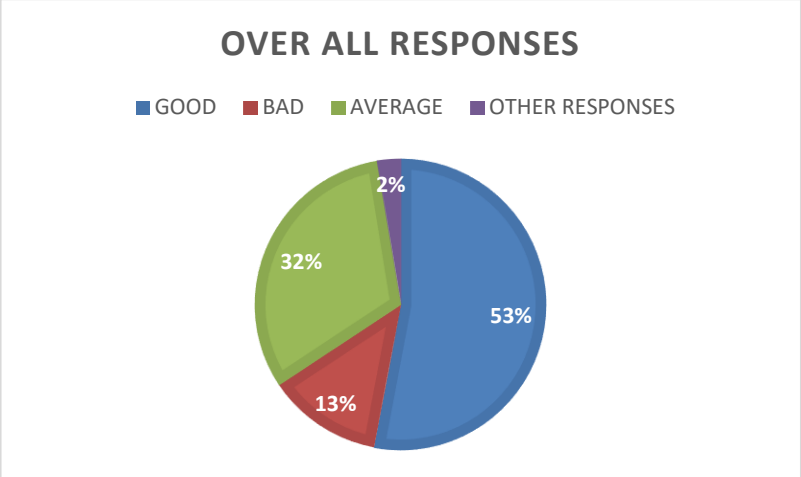
Date: **Signature of the Mentor** **Signature of the Student**

DATA INTERPRETATION AND RESULTS

USAGE OF ELECTRICAL APPLIANCES	
ELECTRICAL COOKERS	20
WASHING MACHINES	12
REFRIGERATOR	15
OTHERS	7



OVER ALL RESPONSES	
GOOD	25
BAD	6
AVERAGE	15
OTHER RESPONSES	11



CONCLUSIONS

Modern fuels have significantly replaced biofuels in urban areas. The consumption of electricity and LPG is rapidly increasing. Growing population in urban areas, escalating cost of petroleum based products, the limitations on distribution of commercial energy sources and lack of purchasing power among vast majority of people, make it unlikely that urban household situation will change substantially in near future.

Consumers are now entered into a new phase of fuel scarcity, where struggle is not for finding wood, but to obtain enough dung, straw and crop residues to cook their food. No single fuel can meet the growing demands of urban household energy. Urban consumers are using and will use in future too almost all kinds of energy sources ranging from traditional biofuel to modern LPG, electricity.

Urban poor are continuosly deterred by the high cost of modern fuels and equipment to use them. On the basis of household income, policy shall be formulated to determine improved access to kerosene and LPG fuel. Urban household energy problem is multi-dimensional which need to be tackled through integrated approach focussing augmentation of various energy supply sources, development of low cost energy options and efficient use of fuels.

REFERENCES

[1] IEEE Std 3007.3-2012, “Recommended Practice for Electrical Safety in Industrial and Commercial Power Systems”. [2] IS 8437-1993, “Guide on effects of Current through human body”. [3] IS 3043-1987(R2006), “Code of practice for earthing”. [4] IS 3034-1993 (R 2002), “Fire safety of Industrial Buildings-Electrical Generating and Distributing Station.


THANK YOU