A STUDY ON THE PRO- ENVIRONMENTAL BEHAVIOUR OF COLLEGE STUDENTS IN RELATION TO ENVIRONMENTAL AWARENESS

A DISSERTATION

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SUBMITTED BY

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CERTIFICATE

It is to certify that the dissertation titled **"A study on the pro- environmental behavior of college students in relation to environmental awareness"** has been prepared by Sangita Haloi, a M. Phil student, Department of Education, Gauhati University, under my guidance and supervision. She has fulfilled all the requirements laid down in the M. Phil regulation in regard to her work at the University. The dissertation is the result of her own investigation. This dissertation or part of thereof was not submitted for any degree of this university or any other university or institute.

I am happy to forward her dissertation to be evaluated for the fulfillment of M. Phil degree.

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DECLARATION

I do hereby declare that the present work entitled **"A study on the pro-environmental behaviour of college students in relation to environmental awareness"** submitted by me for the partial fulfillment of the M. Phil programme to Gauhati University, is my original work and has not been submitted earlier to Gauhati University or any other institutions for the fulfilment for any course of study. I also declare that no chapter of the project in completely or in part is lifted and incorporated in this report from any earlier work done either by others or by me.

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ABBREVIATIONS

Sl. No.	: Serial Number
N	: Number
i.e.	: That is
e.g.	: Example
R	: Response
NCERT	: National Council of Educational Research and Training.
Ref.	: Reference
etc.	: Et Cetera
Sig.	: Significant
df	: Degree of Freedom

CONTENTS

CHAPTER- I

1.0 INTRODUCTION

Man has changed the world through discovery and exploitation of the environment. The needs of human are endless. But the environmental resources which satisfying the needs of human are limited. Over the centuries human beings have been exploiting the environmental resources continuously for their own profit without thinking anything about the possible effects of nature and its resources. Now- a- days, everything a man has done has caused the environmental degradation. In ancient time or many years ago men were successful practicing ecologist. Their relationship with the biotic community was intimate. They had a close and effective social organization. Much of the knowledge of human beings was ecological. It was knowledge of his environment and the most effective use of it. Things began to change after the expansion of agriculture resulting in deforestation, overgrazing, intensive burning and land scanning. Environmental degradation was faster after civilizations have been developed all over the world. Degradation of natural resources was steadily increasing global population which has become dangerous for the environment. Environmental problems are increasing day by day for the wider use of technology in everywhere. There are a number of environmental problems that are common to all citizens of the world. These are water crisis, food shortage, power shortage, poverty, illness, violence and above all high level of pollution. While some of the problems are specific to India whose majority population lives in villages, other problems are global in nature. To reduce the problems of environment, it is very important for all citizens to spread awareness regarding the environment in everywhere.

1.1 ENVIRONMENT

Environment is equated with nature where in physical components of earth such as land, air, water etc. support and affect life in the biosphere. Without environment we cannot even think our life. It refers to social, moral, physical, cultural, mental, economic and political forces which affect the life and nature of behaviour of the organism. It is well organised system of mutually interacting and well integrated elements.

Environment is the complex of physical, chemical and biotic factors that at upon an ecological community and ultimately determines its form and survival. Everything that surround organism at any given point of time and place may be called as environment.

M.V.V Rao says that the environment is the sum of all physical, chemical, biological and sociological factors which compose the surroundings of man.

Section 2(a) of Environmental Protection Act (1986) stated that Environmental includes water, air, and land and inter relationships which exist among and between air and land and human being, other living creatures, plants, micro-organism and property.

National Policy on Education (1986) stated the environment of an individual comprises all the natural and social factors, known and unknown, which affects his living and working conditions.

For the protection and preservation of nature and its resources, it is very important to spread knowledge about environmental education to all the students from kindergarten to higher level of education. Environmental education is a complex process, which always deals with the interdependence and interrelationship of human

beings with their environment. Environmental education helps students to develop awareness level regarding the environment. In order to protect and preserve the sustainability of the planet where we live, everyone of the planet needs to commit to becoming more and more environmentally aware themselves. Environmental education aims at making the students more understandable the effect of daily human activities so that they can develop a positive attitude towards the proper utilization of natural resources for the sustainability of the planet. Environmental awareness through environmental education can help all the students to understand the maintenances the balance between environment and planet. The approaches of environmental education are interdisciplinary and multidisciplinary.

In the words of ***Mishra, (1993),*** "Environmental education appears to be a process that equips human beings with awareness, knowledge, skills, attitudes and commitment to improve environment." Environmental education always identifies the ecological imbalance and try tries to improve them for the sustainability of the planet. It also examines the major environmental issues from the local, regional, national as well as international point of view. It also promotes the value and necessity in the prevention and solution of environmental issues.

1.2 PRO-ENVIRONMENTAL BEHAVIOUR

Our environment is the most significant mechanism for every human being. Communications among human beings and environment that incessantly occur will always harm human actions on the environment. The way a man treats their environment will always have a crash on the worth of human living itself. Protection of environment and improvement are the major tests facing our society in the present time.

So, it is the main aim to have knowledge about pro-environmental behaviour and to understand its worth in society.

There is a growing realisation that global environmental challenges such as biodiversity loss, air pollution, global warming and climate change are rooted in human behaviour. Consequently, one pathway to reducing the impact of individuals on the environment is by understanding people's actions in areas such as recycling, waste management, water and energy consumption and other activities to reduce negative impacts on the environment. When a person deliberately choose a behaviour in an order to reduce the unenthusiastic crash of their performance on their surroundings is called Pro-environmental behaviour .The common area of human behaviours that put in to our sustainable environment is referred to as pro-environmental behaviours. The behaviour also defined as person behaviours which causal to environmental sustainability i. e. preventive power consumption; avoid the wastages, recycling and environmental activism etc. All of the performances may be public such as taking mass transit, participate in rally for an environmental problem or may be private such as not using home air cooler on summer. Human impact on the environment includes changes to biophysical environments and to eco-systems, biodiversity and natural resources caused directly or indirectly by humans, including global warming, environmental degradation, mass extinction and biodiversity loss, ecological crisis and ecological collapse. Modifying the environment on a global scale include population growth, overconsumption, overexploitation, pollution and deforestation etc. Some of the problems including global warming and biodiversity loss pose catastrophic risk (a hypothetical future event that could damage human well- being on a global scale) to the

survival of the human race, and some expert's attributes this crisis to overall human overpopulation.

Engagement of human beings in positive human behaviour are the part of human's personal life's which are volitional performance embedded in their possess programme. Even though common structures i. e. the occurrence of a open transport system, recycling series in one's city, may sustain or obstruct pro-environmental behaviours, and act in a ways that profit the environment is eventually a private option. The barriers of pro-environmental behaviour are the frequent factors that hamper persons when they are trying to adjust their behaviours toward more sustainable living of lifestyles. The barriers can be detached into outsized categories i. e, emotional, communal/educational, economic and structural. Emotional barriers are measured as the inner, where the persons' information, values and belief affect the behaviour of person. Societal and educational barriers are relative, where mans behaviour is pretentious by their environment, for example - locality, urban; municipality etc. Economic barriers are basically requiring resources to progress toward more sustainability of behaviour i. e. recent technology, electrical vehicles etc. Structural barriers are seen to be exterior which frequently unfeasible for a human being to manage, for e g. need of governmental accomplishment, area of house that promote car utilize as contrasting to open transportation.

The past decades have witnessed an increase in studies on the role of education in fostering pro-environmental behaviour. Scholars have documented the growing presence of environmental and sustainability education in higher education institutions around the world. However, we know little about how colleges and universities mobilize students to adopt pro-environmental behaviours. In the last four decades, many researchers have

investigated the negative impact of humankind on the carrying capacity of the earth (friends of the earth, **2009/; WWF, 2012**), It is acknowledged that the increasing pollution of water, air and land resources on the other hand is caused by human behaviour (**Lehman and Geller, 2004).** As a consequence, governments of many countries developed policies to restrict industrial pollution, preserve natural resources, reduce greenhouse gas emissions etc. of their citizens, and research additionally focused on the development of more sustainable lifestyle in household **(Kronenberg,2007: Marchand and Walker, 2008),companies (Kurzinger, 2004: Rosner,1995).**

There are less number of studies have been found regarding pro-environmental behaviour in college level. This study intended to observe the significance of pro-environmental behaviour in students of college level. In order to enhance more sustainable behaviour in college students, recent research focuses on the identification of factors that have an impact on pro-environmental behaviour. This research study was an attempt to identify the factors that could predict the pro-environmental behaviour among the college students of the particular area.

1.3 STATEMENT OF THE PROBLEM

The study entitled as "A study on the pro- environmental behaviour of college students in relation to environmental awareness".

1.4 OPERATIONAL DEFINITION OF THE STUDY

1.4.1 Pro-environmental behaviour: Pro-environmental behaviour is the basic behaviour which supply to sustainable environment. These behaviours may be open or personal.

1.4.2 Environmental awareness: Environmental awareness is a variety of experiences and acquires basic understanding of environment and its associated problems. It also includes how the environment is linked with life support system (i.e. air, water, land, sun light, flora and fauna). When people go “go green”, they are practicing Environmental awareness.

1.5 SIGNIFICANCE OF THE STUDY

Pro-environmental behaviour is a self effort to decrease the unenthusiastic force caused by devastation of environment by recovering and preserve the nature. It is very important, especially among the younger generation of society. Today’s students are the future of our society and nation. So it is the main aim of every citizen to protect our environment and increase knowledge by reading environmental education. It helps learners to develop into extra conscious towards their surroundings .Therefore it is necessary whether Environmental education and environmental awareness influence the pro-environmental behaviour of the students or not.

1.6 OBJECTIVES OF THE STUDY:

1. To have knowledge about the environmental awareness of college students of Nalbari District.
2. To study the pro-environmental behaviour of the college students of Nalbari District.
3. To compare the pro-environmental behaviour of the college students with respect to gender.
4. To compare the pro-environmental behaviour of students with respect to streams.

5. To see if there exist any relationship between environmental awareness and pro-environmental behaviour of college students.
6. To see if there exist any relationship between environmental awareness and pro-environmental behaviour of college students with respect to gender.
7. To see if there exist any relationship between environmental awareness and pro-environmental behaviour of college students with respect to stream.

1.7 HYPOTHESES:

$H_{01.}$ There exists no significant difference between the pro-environmental behaviour of boys and girls.

$H_{02.}$ There exists no significant difference between the pro-environmental behaviour of students of Arts Stream and Science Stream.

$H_{03.}$ There exists no significant relationship between the environmental awareness and pro-environmental behaviour of college students.

$H_{04.}$ There exists no significant relationship between the environmental awareness and pro-environmental behaviour of college students with respect to gender.

$H_{05.}$ There exists no significant relationship between the environmental awareness and pro-environmental behaviour of college students with respect to stream.

1.8 AREA OF THE STUDY:

The area of the study for the particular research is Nalbari District, Assam, India. Nalbari is an administrative district in the state of Assam in India. Nalbari district is located in among 26◦ & 27◦ Latitude and 91◦E & 97◦E Longitude at the altitude of

89.00 m above ocean point. The northern surface of the district is delimited by the Baksa District and the southern surface by the great river Brahmaputra. The Baksa and Kamrup District fall in the East and the Barpeta District in the Western side. The population of the district is 1004343. The district is a major railway, highway and air transport hub served by airports.

The district is famous for Sanskrit education. There are 12 colleges in Nalbari District. There is a University named Kumar Bhaskar Varma Sanskrit and Ancient Studies University, was established at Nalbari in 2011. The Educational opportunity in Nalbari is very high. Students come here from different areas for their higher studies. The area is popular especially for education.

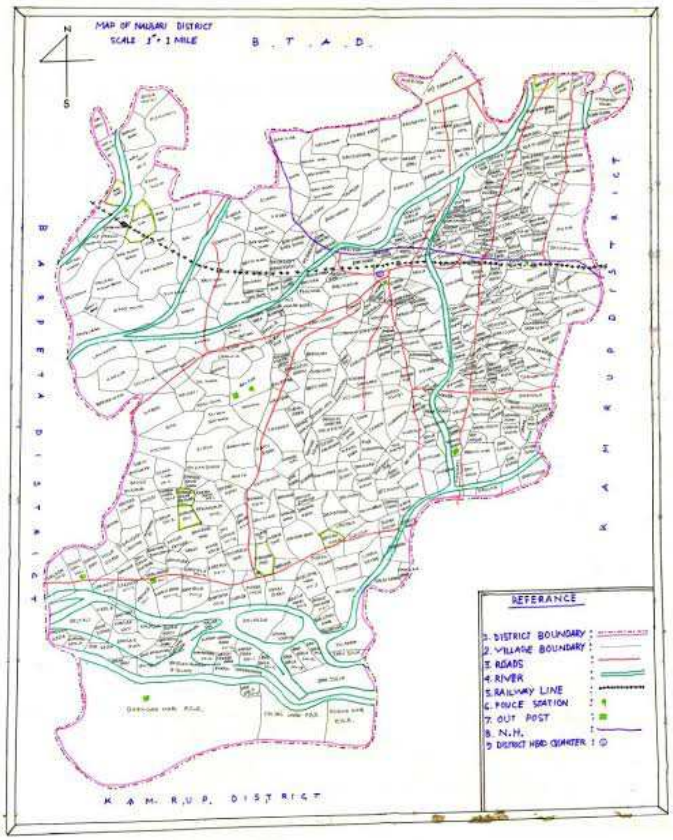

Figure 1.1 MAP OF NALBARI

1.9 DELIMITATION OF THE STUDY:

1.9.1 Area wise: For the present study only Nalbari District of Assam has been considered as the study area.

1.9.2 Type of college: The study was covered only to four Provincialised college of Nalbari District.

1.9.3 Students: For the present study only the students who had already studied the environmental education as a compulsory subject were considered.

1.9.4 Stream wise: Only two streams namely Arts and Science has been considered.

1.9.5 Number of students: Due to time constraint only 200 students has been taken.

1.9.6 Gender wise: The study were covered only the boys and girls.

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CHAPTER- II

2.0 REVIEW OF RELATED LITARATURE

Review of related literature is very important steps in any research study. A cautious re-evaluate of the research paper, books, dissertations, theses and other sources of information's on the difficulty to be investigated is one of the most important actions in the preparation of every research study (Lokesh Koul). A review of relate literature must precede any well planned research study. Review of related literature; besides, allowing the researcher to acquaint himself/herself with current knowledge in the field or area in which he/she is going to conduct his research. The knowledge of related literature, brings the researcher up-to-date on the work which others have done and thus to state the objectives clearly and consciously. By reviewing the related literature the researcher can avoid unfruitful and useless problem areas and also can avoid unintentional duplication of well established findings. The important specific reason for reviewing the related literature is to know about the recommendations of previous researchers listed in their studies for further research.

An attempt has been made here to collect and review a number of research articles, journals, thesis, and dissertations and other publications related to the study. The review

of related literature is classified here into three categories-

- Western studies
- Indian studies
- Regional studies

2.01 Western Studies

The Western studies that are related to pro-environmental behaviour has been mentioned here-

Goodland. (1991) reviewed the status of the debate about the concept of environmental sustainability and discussed the related aspects of growth, limits, scale and sustainability. The study revealed that the monumental challenge of human generation is to feed and house increasing world population without damaging the environment on which the human depend. Thus, the study predicted that the goal of pro- environmental behaviour much be reached as soon as humanly possible.

By means of a systematic literature review, the point of departure in determining the internal and external factors in this research is Ajzen's established theory of planned behaviour(**TPB; Ajzen,1991**), because it has proven its value in former research studies (see for example **Cordano et al..2010; Rioux,2011**). Furthermore, it is one of the more commonly referenced theories in the field of environmental studies (Nye and Hargreaves, 2010). According to **Ajzen and Fishbein (2004**), the intention to act is the strongest predictor of actual behaviour. The antecedents of the intentions to act are found in three construct; one's attitude toward the behaviour, his or her subjective norms and his or her behavioural control over the situation in which he or she is expected to act and behave in a specific way.

Chan. (1996) studied about the environmental attitudes of students in Hong Kong and their readiness to engage in pro-environmental behaviour that could involve change in personal lifestyle. The study had found student's over-optimism towards technological

development as well as the perceived importance of the benefits of modern consumer goods was major factors that contradicted their concern for the environment.

De, Y. (2000) conducted a study on expanding and evaluating motives for environmentally responsible behaviour. The study examined a strategy for promoting environmentally responsible behaviour that has the significant potential. In his study identified the barriers and motivations that are related to people's recycling habits based on patterns that emerged across numerous social science research studies on pro-environmental behaviour.

Kalanthri, et. al. (2007) conducted a study to find out individual and social factors affecting environmental behaviour of urban citizens. To examine the conceptual model, 1200 individuals of Tehran residents were randomly chosen and interviewed about their environmental behaviours, opinions, knowledge and sources of information on environment. The data were analyzed using correlation analysis, student's t test, analysis of variance (ANOVA) and path analysis by SPSS Software. Results showed that environmental behaviour of people in urban areas directly and indirectly are under the influence of variables like age, gender, income, education, problem-based knowledge, environmental attitude etc. to act of the residents.

Kilbourne, et. al. (2008) examined their study about the relationship between materialism, environmental beliefs, environmental concern and environmental behaviours. The study used a random telephone survey using a casual modelling approach. The study found that materialism has a negative effect on environmental beliefs and it positively affects environmental concern and environmentally responsible

behaviours. The study found that there exist a positive relationship between concern and behaviour.

Marquit. (2008) examined the threat perception related to environmental issues such as air pollution may be a determinant of pro-environmental behaviour. Because of rapid increase in population growth, urbanization and the mountainous landscapes, the American west is extremely susceptible to the adverse impact of air pollution. The study focused on the public perception of air pollution in Cache county and perceived impact on personal and community life. The survey found that threat perception predicted some pro-environmental and avoidance behaviours.

Tom, H. (2008) conducted a study on making pro- environmental behaviour work of practise, process and power in the workplace. It investigated what actually happen when pro- environmental ideas come into contact with, and are contested in the course of everyday practice. It argues that pro- environmental behaviour change is a fundamentally social process involving power struggles and collective negotiations over what should count as appropriate behaviour in specific context.

Lars, W. (2009) conducted a study on promoting pro- environmental behaviour of the cross cultural environmental behaviour patterns. The purpose of the study was to identify social and psychological factors that influence environment behaviour and use those as a basis for an empirical study in Abu Dhabi, United Arab Emirates. The findings suggested that willingness to sacrifice for the environment, perceived behavioural control of environment problems and the feeling of responsibility of environmental problems were significantly positively related to environmental behaviour in Abu Dhabi.

Jan, K. (2010) conducted a study on Environmental and Pro-environmental Behaviour. The author had offered a concept that may facilitate orientation in the many factors that affect our environmental behaviour. The author also emphasized the importance of the people forming a personal relationship with nature. In the study the author had adopted some areas of environmental behaviour like, issues of environmental aesthetics, issues connected with health, natural resources issues, life protection and its dignity etc. A person with a lower environmental sensitivity is able to visualise only few environmental details in their neighbourhood. A person with a greater concern is motivated to preserve nature and the environment.

Jessica, L. Kirk (2010) had carried out a study on sustainable environment and pro-environmental behaviour. The study examined the relationship between an individual's pro- environmental behaviours and the sustainably planned construction using LEED for recent structure and main restoration, Green construction Rating System as a model of assess

Melgar, et. al (2013) had studied on the attitudinal factors which establish the apprehension for the environment as well as pro- environmental behaviours i.e. sorting and recycling the trash and cutting back on driving car, though trying to account for the heterogeneity of pro-environment attitudes. The study considered a set of heterogeneous behaviours, something which would help to compare the consistency of the determinants between different pro-environmental behaviours; clarified that are the environmental behaviours differ between countries.

Birgitta, G. et. al. (2014) had studied on values, identity and pro- environmental behaviour. The paper had studied the position of morals and identities in explanation

human being pro- environmental behaviours. For the study Secondary analyses were conducted on data from three studies on UK residents with 2694 participants. The paper suggested that it may be worth further exploring the role of identities. The findings showed that mediates the relationship between values and behaviour lends weight to, and refines and the argument of identity campaigning: not only values but self- identity more are important as predictors of green behaviour.

Erkan, A. et. al. (2017) conducted a study on the consequences of environmental illiteracy and awareness surrounded by middle school students on environmentally friendly behaviour. The study had proposed and engaged a structural model to observe the belongings of environmental literacy, environmental consciousness, environmental thoughts, and environmental actions in the midst of middle school students on their purchase of environmentally responsive creations. The findings of the study indicated that students with environmental consciousness increase encouraging outlooks toward the environment. The occurrence of optimistic approach toward the environment leads to exhibit pro- environmental behaviours and approve an optimistic approach.

Tyas, P. et. al. (2018) examined importance of pro- environmental behaviour in youngster. The study intended to observe the significance of pro- environmental behaviour in youth. By using descriptive survey method the results of the study had found that the adolescents with crucial thoughts and superior environmental education were likely to perform more environmentally responsive for creating a sustainable opportunity.

Goldman, et al. (2020) conducted a study on Education for Environmental citizenship and responsible behaviour which focused on facilitate an individual's intellectual growth (cognitive domain) and emotional capacity (affective domain) that may lead to a critical

and actively engaged individual. The result had found that implication of educational interventions to foster environmental citizenship might raise false expectations to see immediate behavioural change.

Mohd, Y. Yulisliza, et al. (2020) examined the pro- environmental behaviour and sustainable development in Malaysia. The study intended to observe the responsibility of environmental assurance, awareness, green standard of living, and self-competence in influencing pro- environmental behaviour. The information was collected through an assessment of 72 students from one of the training centres in Malaysia. Results of the study had found that the ecological responsibility, awareness, green standard of living, and self- worth optimistically inclined pro- environmental behaviour.

B, Handoyo, et. al. (2021) had conducted a preliminary study on green responsiveness and pro- environmental behaviour of geography students, state university of Malang. The objective of the study was to appraise the altitude of environmental consciousness and pro- environmental behaviour among the undergraduate Geography students of Malang. Using descriptive qualitative research design, the results of the study found that the majority of the students were informed well with infatuated advanced perceptive of environmental trouble and being environmentally awareness doesn't necessarily translate directly into environmentally responsible behaviour.

2.02 Indian Studies

Shahnawaj, (1990) conducted a study on environmental awareness of secondary and higher secondary teachers and students in Rajasthan. The study found that female students possessed significantly more aware than males.

Study conducted by **Banerjee et. al. (1994**) on a sample of 309 students in North America to investigate the relationship between environmental behaviour and materialism. The study found a positive relationship between environmental attitude and behaviour.

Gupta (1997) conducted a study on adolescent's environmental awareness in connection with religious and scientific attitudes and scholastic achievement. The sample was taken as 500 adolescents from the district of Hadoti. The study found that while religious and scientific attitudes, gender, habitation and scholastic achievement of adolescents possesses significant effect over the environmental awareness, religious attitudes and managerial background does not possesses any significant impact over such awareness.

Goswami , et. al. (2001) conducted a study on pro-environmental behaviour, attitudes and values in different community groups of Shimla. For the study the investigators took 290 undergraduate males and females at the age group of 17-20 from the respective community groups were selected. The results of ANOVA ant t-test showed that on pro-environmental behaviour, attitude the difference was significant between the community groups.

Madhumala, S. et. al. (2006) studied on the consequence of prospect and gender on environmental awareness and pro- environmental behaviour among school going students. The study intended to observe the consequence of sightedness and gender on the scores of environmental awareness and pro- environmental behaviour of the students and to examine the degree of connection amid environmental responsiveness and pro-environmental behaviour of normally sighted students and visually impaired students.

The investigator had applied purposive sampling method. The results of the study had revealed that the relationship between awareness and action is similar for both the two groups.

Deeksha, (2012) conducted a study on impact on environmental study on the environmentally suitable behaviour and consciousness of students of Udaipur, Gautam Buddha Nagar City with the objective of comparison of environmentally responsive behaviour and warmth on general consciousness of undergraduate students. The study revealed that sex and point of education would progress the level of responsiveness and attitudes as regards to environmental issues.

Samal, R. M (2013) conducted a study on environmental knowledge, personal values and pro-environmental behaviour in Delhi. The sample size was taken as 1000. The responses were collecting by distributing questionnaire. The result had found that perception and willingness to pay more have the significant impact on purchase intention but not the same for every pro-environmental product.

Meenakshi, G. et. al. (2013) conducted a study on environmental responsive consumption of young consumers in India. The study aimed to empirically investigate how consumers who differ in terms of environmentalism behave in terms of their consumption habits. The data were analysed using both descriptive measures and correlations between variables. He results of the study indicated that consumers have a positive attitude towards the environment, they demand green products, and they attempt to read environmental labels.

Anita, S. et. al. (2014) calculated a relative study on environmental awareness among teachers of secondary school in U.P, India. The aim of the study was to examine the environmental awareness of secondary school teachers in relation to sex, board and study courses. For the study 1000 teachers were selected as the sample of the study from different CBSE schools where 600 were male and 400 were female. The study had revealed that the female teachers were more environmentally aware in comparison to male teachers, because they were emotionally more attached with the environment and more involved in the society.

Srivastava, P. (2015) studied various factor affecting environment-friendly behaviour. The result of the study found that there is no discrimination in the environmental attitude, environmental awareness and environment friendly behaviour among the students with respect to their gender. It further showed that all the F value found significant in relation to study the effect of environmental attitude, environmental awareness and environment friendly behaviour.

Manikandan, K. (2015) was conducted a study on environmental thoughts, environmental behaviour and awareness amongst the teachers of B . Ed student teachers in state of Tamilnadu. The sample of the study consisted of 970 student teacher selected through stratified sampling technique. The result of the study found that 18.9% of B.Ed students contain positive approach and 13.3% contain adverse approach towards environment. However 19.8% B.Ed student teacher have positive behaviour, 64.9% have average behaviour and 15.3% have negative behaviour towards environment. The study also revealed that the female have secured more positive environmental behaviour than male.

Kumari, (2018) conducted a study on pro-environmental behaviour among students at the secondary and higher secondary levels- An analysis of Educational, Psychological and Social variables. The study had involved multiple variables necessitating multiple populations and combinations. The study was conducted on the city of Chennai, a metropolitan city in the Southern State. The investigator had done the study through a systematic randomization of selection of schools. In this study it is observed that the pr-environmental behaviour of students in urban area is significantly better.

Saumya, A. et al. (2018) conducted a study on assessment of pro- environmental behaviour on consequence of self- personality on pro- environmental performance. The study intended to observe the connection between environmental approach and performance through highlighting on barriers towards pro- environmental behaviour. The results revealed that the subsistence of unenthusiastic relationship between attitude-barriers, attitude- behaviour and barriers- behaviour.

2.03 Regional Studies

Kumud, G. (2014) conducted a study on environmental awareness amongst the students of secondary school, and their attitude to environmental education Assam . The investigator was used Descriptive survey method for the study. 200 students were selected as a sample (100 male and 100 female). The finding of the study revealed that environmental awareness and attitude to environmental education amongst the students was not found considerable. However in case of the students belonging the rural and urban area, the attitude towards environmental education was not found also significant. The connection amid the two mentioned variables amongst the students was found to be well-built as well as encouraging.

Tribhuwan, Kr. Bhartiya(2017) conducted a study on Assessment of Environmental Awareness Among General Public of Assam. By applying descriptive survey method the results of the study had found that the Environmental awareness of females of Assam are better than that of males of Assam. But on observing the t- value between the scores of males and females, it was observed that there was not found any considerable difference in environmental awareness in males and females of Assam.

Minakshi, K. (2019) had conducted a study on environmental awareness of students and their pro- environmental behaviour in Kamalpur, Assam. The aim of the study was to know the knowledge of the students about pro- environmental behaviour and to study the activities of the students towards environment. 120 students were covered for the study as sample from six schools. The study had found less number of the secondary school students who were showed responsible environment behaviour.

Sima, K. et. al. (2020) has conducted a study on the pro –environmental behaviour of adolescents in Assam. The aim of the study was to observe the pro- environmental behaviour of adolescents and to evaluate the pro- environmental behaviour of students with respect to gender and the financial eminence and pro- environmental behaviour of students. The investigator had used Descriptive survey method for the study. 100 students were selected as a sample for the study. The study had revealed that most of the students were not aware about pro- environmental behaviour and the girl students were more aware than the boy students with respect to environment.

2.04 Resume of the reviews:

From the discussion and the review f the related literature it is found that number of studies has been done in India, Abroad, State as well as pro-environmental behaviour of

the students. Researchers have investigated pro- environmental behaviour from different variables such as environmental education, environmental awareness, environmental attitude, socio- economic status, environment and human relationship etc. on the basis of the available literature an attempt has been made to sketch the pro- environmental behaviour of college students. From the reviews it is clear that there were so many studies have been done on environmental awareness and pro- environmental behaviour. But, there were less study has been found regarding the relationship between environmental awareness and pro- environmental behaviour. There is an urgent need to address the research gap. It is clear from the review that no studies has been under taken on pro- environmental behaviour of college students under Nalbari District, Assam. Therefore to study the pro- environmental behaviour of college students, the students' of four colleges has been taken. As such reason the present study is significant.

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CHAPTER- III

RESEARCH METHODOLOGY AND DESIGN OF THE STUDY

3.0 Research Methodology

A Methodology is a system of methods and principles for doing something, for example for teaching or for carrying out research. It is the most important step in every single research. Research methodology is the specific procedures or techniques used to identify select, process and analyze information about a topic.

In a research paper, the methodology section allows the reader to critically evaluate a study's overall validity and reliability. It helps the researcher to collect the data for their study. Research methodology helps the researcher to make investigation easy. Research methodology is a way to solve the research problem. It is necessary for the researcher to know not only the research methods/techniques but also the methodology. Research methodology also helps the researcher to choose the appropriate statistical tools or techniques to analyze and interpret the data and processes of inferences and generalizations.

3.01 Methods of Educational Research

Education with its own field of investigation has evolved its methodology of generating knowledge which may be called 'educational research'. This methodology bears similarity to the way it developed in other social sciences and follows the same steps of 'scientific method'. So, educational research is an application of scientific method to the study of educational problems. There are three types of methods widely used in educational research. They are-

- Historical research
- Experimental method
- Descriptive method

3.02 Research Consideration for the Present Study

The researcher has been used Descriptive survey method for the study. Descriptive research studies are planned to attain relevant and accurate information regarding the present status of phenomenon to describe suitable universal conclusions from the evidence revealed. They are more than just a collection of data. Descriptive survey research involves measurement, classification, analysis, comparison, and interpretation.

Descriptive studies investigate phenomena in their natural setting .The purpose of the research is both immediate and long range. This research differs from other types of research in purpose and scope. The Descriptive method, in contrast to an experiment, is relatively less scientifically sophisticated. Descriptive studies vary greatly in complexity. They constitute nothing more than frequency count of events to the study of local problems without any significant research purpose.

Descriptive research method has undoubtedly been the most popular and the most widely used research method in education. It helps to explain educational phenomena in terms of the conditions or relationships that exist. The Descriptive investigations are of immense value in solving problems about children, school organization, supervisions and administration, curriculum, teaching methods and evaluation. The descriptive type of research is useful in the development of data gathering instruments and tools like tests, checklists, schedules, questionnaires and

rating scales. It also provides the background ideas and data from which many more refined or controlled studies of casual relations are made.

The present problem "**A Study on the pro- environmental behaviour of college students in relation to environmental awareness**" requires Descriptive Survey method which intended to observe the pro- environmental behaviour of students in relation to Environmental education and Environmental awareness.

3.03 VARIABLES:

Independent Variables	Dependent Variable
Environmental awareness	Pro-environmental behaviour

3.04 Population for the Present Study

Any collection of persons that has one or more character in frequent and that are of interest to the researcher is referred as population. There are various ways to configure the population depending on the characteristics of interest. If there is too much diversity in population, then researcher needs to narrow the population. This would result in a target population consisting of the specific group to whom researcher plan to generalise findings. If a population is not properly defined, a researcher does not know what units to consider when selecting the sample.

There are 12 provincialised colleges in Nalbari district under Gauhati University. The population for the present study was consists of all the students studying in 4^{th} semester of four provincialised colleges of Nalbari District, Assam.

3.05 Sample

The representative proportion of the population is called a sample. To obtain a representative sample, the researcher selects each unit in a specified way under controlled conditions. From selecting a sample from a population, it is necessary to have a complete, accurate and up to date list of all the units of the population i. e. the *sampling frame*.

After defining a population and listing all the units, a researcher selects a sample of units from the sampling frame. The process of such a selection of representative sample is called sampling. In the present study, the investigator in the first stage has selected 4 colleges out of 12 provincialised colleges. It is 33.33% of the population of colleges in Nalbari District. In the second stage, 200 college students (50 from each), out of 4789 students were selected as the sample for the study, where 100 were male and 100 were female.

3.06 Sampling Procedure:

In the present study, the investigation has applied Simple Random Sampling Technique for selection of sample. In Simple Random Sampling, each unit of the population is given an equal chance of being selected. A Simple Random Sampling is meant to be an unbiased representation of a group. From the same sampling frame the sample was selected with the help of lottery method.

3.07 Tools used for Data Collection

A Researcher will require many data gathering tools and techniques which may vary in their complexity, design, administration and interpretation. The selection of suitable

tools is of vital importance for carrying out of a research activities. Each tool or technique is appropriate for the collection of certain type of evidence or information. The researcher has to select from the available tools, which will provide data, he/she requires for the testing of hypotheses. Selection of tools is mainly based on the objectives of the study. The success of the research work depends upon the tools used in data collection and results verification. In the present study, the researcher has been used various tools such as-

- Personal data sheet prepared by the investigator.
- Self structured Questionnaire on Environmental Awareness.
- Self structured Questionnaire on Pro-environmental behaviour.

3.08 Procedure for Data Collection

Both primary and secondary sources of data have been used in the present study. The responses of the college students had collected through primary sources with the help of Environmental Awareness Questionnaire and Pro-environmental Behaviour Questionnaire.

3.08.01 Primary Data:

Primary data is a type of data that is collected by researchers directly from main sources through interviews, surveys, experiments, etc.

From collecting data from the students of various colleges of Nalbari District, at first the researcher has approached the principals of colleges for permitting her to proceed for data collection process. Then, the investigator entered into the classroom with a teacher of the college and established rapport with the students. After that she has

given the personal datasheet and then the environmental awareness questionnaire and pro- environmental questionnaire to them. The students took 30/35 minutes to return their completed questionnaire to the investigator. They were found to be very cooperative.

3.08.02 Secondary Data

Secondary data is public information that has been collected by others. It is typically inexpensive to obtain. In the present study, Secondary data was collected from different books, journals, information connected to the part of the study. Both primary and secondary data are equally important for the study.

3.09 Statistical Method Applied for Analysis of Data

The investigator had analyzed the collected data by applying suitable statistical methods with the help of Statistical Package for Social Sciences (SPSS), version 25 has been used in analysing the data. The following methods was used for analysis of data-

- Percentage analysis
- Chi- square test
- Mann- Whitney U test

In the study, Percentage analysis has been applied to see the environmental awareness and Pro- environmental behaviour of the college students in respect to gender and stream.

Chi- square test was applied to see the significance of the relationship between environmental awareness and pro- environmental behaviour of the college students in respect to gender and stream.

In the study, Mann- Whitney test was used to evaluate comparison of the pro-environmental behaviour of students with respect to gender as well as stream.

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CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

After the collection of data, the very next step is analysis of data by applying suitable statistical methods. This chapter deals with analysis and interpretation of data of the study. The data has been analysed and interpreted according to the objectives of the study. The data were analyzed as follows -

4.0 Analysis and Interpretation:

Objective 1: To have knowledge about the environmental awareness of college students, Nalbari District.

Table 4.1: Responses of students regarding Pro-environmental Behaviour

SL. NO.	Items	R1	%	R2	%	R3	%	TOTAL
1	AWARENESS OF STUDENTS ABOUT ENVIRONMENTAL POLLUTION	62	31.0%	58	29.0%	80	40.0%	200
2	KNOWLEDGE OF STUDENTS ON PRO-ENVIRONMENTAL BEHAVIOR	57	28.5%	68	34.0%	75	37.5%	200
3	INVOLVEMENT OF PLANTATION PROGRAMME	86	43.0%	60	30.0%	54	27.0%	200

SL. NO.	Items	R1	%	R2	%	R3	%	TOTAL
4	REVIEW OF COLLEGE ENVIRONMENT BY STUDENTS	88	44.0%	96	48.0%	16	8.0%	200
5	USAGE OF DUSTBIN IN COLLEGE	64	32.0%	98	49.0%	38	19.0%	200
6	REACTIONS TO SEE DAMAGING THE PLANTS, FLOWERS ETC. BY ANYONE	122	61.0%	52	26.0%	26	13.0%	200
7	REACTIONS TO SEE DYING ANY PLANT, FLOWER	73	36.5%	91	45.5%	36	18.0%	200
8	EARN KNOWLEDGE BY READING ENVIRONMENTAL EDUCATION	62	31.0%	76	38.0%	62	31.0%	200
9	INVOLVEMENT OF PLANTATION PROGRRAMME IN COLLEGE/SOCIETY	88	44.0%	54	27.0%	58	29.0%	200
10	REACTIONS TOWARDS PEOPLE WHO DAMAGE GREEN TREE OR TREE	98	49.0%	54	27.0%	48	24.0%	200

SL. NO.	Items	R1	%	R2	%	R3	%	TOTAL
11	REACTIONS AFTER SEEING ANIMAL WHO DAMAGE PLANTS INSIDE THE COLLEGE	42	21.0%	110	55.0%	48	24.0%	200
12	REACTIONS TOWARDS DYING PLANTS OR FLOWERS	88	44.0%	78	39.0%	34	17.0%	200
13	REACTIONS TO SEE OTHERS CATCHING BUTTERFLIES	79	39.5%	25	12.5%	96	48.0%	200
14	REACTIONS AFTER SEEING INJURED BIRD	66	33.0%	76	38.0%	58	29.0%	200
15	REACTIONS AFTER HEARING LOUD SPEAKER IN LOCALITY	78	39.0%	84	42.0%	38	19.0%	200
16	PREFERRED TYPES OF CRACKERS	89	44.5%	81	40.5%	30	15.0%	200

SL. NO.	Items	R1	%	R2	%	R3	%	TOTAL
17	INVOLVEMENT OF STREET PLAY ON ENVIRONMENTAL AWARENESS	64	32.0%	58	29.0%	78	39.0%	200
18	WHILE WATCHING T.V CONCERN ABOUT	68	34.0%	62	31.0%	70	35.0%	200
19	REACTIONS AFTER SEEING WATER TAP LEFT OPEN IN COLLEGE/HOME BY ANYONE	124	62.0%	20	10.0%	56	28.0%	200
20	USES OF WATER DURING BRUSHING TEETH	87	43.5%	89	44.5%	24	12.0%	200
21	USES OF WATER DURING BATHING	86	43.0%	78	39.0%	36	18.0%	200
22	USAGE OF WATER LEFT IN WATER BOTTLE	77	38.5%	43	21.5%	80	40.0%	200
23	REACTIONS AFTER SEEING SEE WATER TANK FULL IN COLLEGE/HOME	98	49.0%	56	28.0%	46	23.0%	200

SL. NO.	Items	R1	%	R2	%	R3	%	TOTAL
24	REACTIONS AFTER SEEING SOMEONE PLAYING WITH RUNNING WATER PIPE	72	36.0%	94	47.0%	34	17.0%	200
25	NATURE OF USNG PLASTICS WHERE THERE IS NO DUSTBIN	80	40.0%	68	34.0%	52	26.0%	200
26	NATURE OF USE OF DUSTBIN IN COLLEGE	96	48.0%	68	34.0%	36	18.0%	200
27	WAYS OF DISPOSAL OF WASTE DURING TRAVELLING	64	32.0%	80	40.0%	56	28.0%	200
28	WHAT WILL DO TO THE FANS, BALBS IN HOME BEFORE GOING OUT	84	42.0%	48	24.0%	68	34.0%	200
29	TIME SPEND TO WATCHING TV	102	51.0%	44	22.0%	54	27.0%	200

SL. NO.	Items	R1	%	R2	%	R3	%	TOTAL
30	ENTERING THE ROOM DURING DAY TIME	98	49.0%	53	26.5%	49	24.5%	200
31	NATURE OF USING ELECTRICITY	88	44.0%	92	46.0%	20	10.0%	200
32	REACTIONS AFTER SEEING ANY VEHICLE IS GIVING SMOKE IN HOUSE	88	44.0%	58	29.0%	54	27.0%	200
33	REACTION TO SMOKERS WHO SMOKE IN PUBLIC VEHICLE	66	33.0%	70	35.0%	64	32.0%	200
34	MODE OF TRAVELLING TO NEARBY PLACES	52	26.0%	85	42.5%	63	31.5%	200
35	CARRY BAGS PREFRRED BY STUDENTS	92	46.0%	49	24.5%	59	29.5%	200
36	NATURE OF FURTHER USE OF POLETHENE BAGS	70	35.0%	86	43.0%	44	22.0%	200

Interpretation (Item 1 to 36) :

In table 4.1 the pro-environmental behaviour of the students has been analyzed. It has been found from this table that 31% of the college students of Nalbari district were aware of environmental pollution, 29% were less aware of it and most of the students (40%) were not aware of environmental pollution.

Item 2 was regarding the students' knowledge of pro-environmental behaviour. From table 4.1 it has been found that 28.5% of students had some knowledge about pro-environmental behaviour, 34% had little knowledge about it but the majority of the students (37.5%) had no knowledge about pro-environmental behaviour.

Item no 3 was related to students' engagement in plantation drive. Regarding this item table 4.1 has shown that major portion of the sample of college students majority i.e. 43% got engaged in plantation programme, 30% were ashamed of involving in plantation program and 27% were not interested in such type of activities.

College students were also asked to rate their college environment (Item 4). It has been found from the responses (Table 4.1) that 44% had rated it as good, 48% had rated it as average, and 8 % had rated it as poor.

Through item 5 it was intended to know the nature of usage of dustbin by the college students. The table 4.1 has shown that 32% of the sample students had used dustbin judiciously, 49% used them wherever needed, 19% used to throw waste materials anywhere.

Item 6 tried to see the reactions of the sample college students when they see damaging plants, flowers etc. by anyone .More than half (61%) of the sample students were aware of this and they tried to stop and convince people no to damage those plants

and flowers but 26% of the college students had ignored it and the cause of concern is that 13% of the students said that they would also do the same.

When the sample students came across some dying plants or flowers 36.5% reported that they would tell others to pour water whereas 45.5 % said they would pour water by him or herself, whereas 18 % reported that they would not take it seriously.

Item 8 of the questionnaire tried to know the amount of the knowledge by reading environmental education. 31% of the college students reported that they had earned some knowledge, 38% reported that they had little knowledge, and remaining 31 % had earned no knowledge at all, after going through environmental education.

44% of the students were willing to participate in plantation drive organized by college or the society; astonishingly 27 % were ashamed of participating in such drive whereas 29% were not at all interested in such things.

When asked about the reactions towards people who damage greenery or tree (Item 10) 49 % of the college students said that they would do nothing in such a situation, 27% would stop those people and convince those people not to do that again and 24% will go one step further and they would complain the local authority to stop such happenings.

From analysis of item 1, it was seen that 21% of the students along with their friends would push those animals out who damage plants inside the college. 55% would tell the chowkidar and 24% reported that they would do nothing.

When the sample college students saw dying plants or flowers (Item 12), a major portion of the students i.e. 44% would tell other to pour water. Only 39% would pour water by themselves and 17% would do nothing.

When asked for their reaction to see others catching butterflies (Item 13), 39.5% said that they would stop them, 12.5 % said they would do nothing and the cause of concern was that, 48% had said that they would join others to catch butterflies.

The sample students were sympathetic towards the injured birds. 33% of the students reported that they would treat the injured bird, 29% said they would tell others to treat but 38% reported that they would ignore it.

Item 15 was related to sound pollution emerged out of loud speaker in the locality. Here in this item 39% students had said that they would tell the people playing loud speaker to stop the loud speaker, 42% tell those people to reduce the volume of the loud speaker and 18% would bear it.

Regarding the preference of crackers (Item 16) 44.5 % preferred crackers having loud sound for a long time, 40.5 % preferred crackers having loud sound but continue for shorter period of time and 15 % preferred crackers having less sound.

With the help of item 17 it was intended to know the sample college students' involvement in street play on environmental awareness. From table 4.1 it has been found that 32% students were interested to get involved in street play on environmental awareness, while 29% were ashamed to take part in such play and a major portion (39 %) of the students were not interested in such kind of activities.

Item 18 wanted to see the students' concern about others while watching Television. Only 34% of the students were aware about their neighbours' while watching Television. 31% had the habit of always keeping the television on high volume and 35% kept it on average volume.

The college students' reactions after seeing water tap left open in college or home by anyone were different. Majority (62 %) of the students reported that they

would stop it both in college or home, 10 % would tell others to stop it and 28% won't take it seriously in the college.

The students' way of using water for brushing the teeth and during bathing were assessed with the help of items 20 and 21. While brushing the teeth, 43.5% took water according to the need, 44.5% reported that they would open and close the tap according to the need and 12 % kept the tap open fully .At the time of bathing, 43% took water according to their need,39% used to close and open the tap according to the need ,18% kept the tap open fully while bathing.

Students' habit of using the water left in the water bottle was not encouraging. Less than half of the students (40%) consciously pour the left over water on plants, 38.5% pour it in the plants and 21.5% often wasted it.

Item 23 wanted to know what the students would do if the water tank was overflowing in college or home and it was found that only 28% would try to stop by their own , most of the students (49%) would tell others to stop and remaining 23% of the college students reported that they would not take it seriously .

When the students came across someone playing with running water pipe 36% have said that they would stop it , majority of the students (47%) would do nothing and 17% have reported that they would also start playing with it.

When the students would not find any dustbin (Item 25) for keeping the used plastics 40 % would use it judiciously, 34% would throw it anywhere and only 26% would find the place of garbage storing and keep it there.

Regarding the nature of using dustbin in the college it was found that 48% used it, 34% never used dustbin and 18% throw the used materials anywhere.

Item 27 tried to know the ways of disposal of waste while travelling it has been found that 32% of the students used to collect and through the material in the dustbin on the station, 40% of the students were having the habit of collecting and throwing it away anywhere and 28% were possessing the habit of throw the used materials in the rain.

With the help of item 28 it was tried to find out what the students do to the fans or electric bulbs before going outside and it was found that 42% said that they would switch off if noticed, and 24% reported that they thought that it was the responsibility of their elders and only 34% switch off the lights and fans by themselves with responsibility, every time.

Table 4.1 has depicted that more than half of the students (51%) spend more than 2 hours watching television, 22% spend 2 hours and 27% spend less than 2 hours.

While entering the room during daytime 49% of the students had the habit of opening the window, 26.5% said they would switch on the tube light and 24.5% said that they would open the window along with the light.

Regarding the nature of using electricity 44% of the students said that it was unnecessarily used by them, 46% used when required and only 10% of the students used less electricity.

It was tried to know the college students' reactions after seeing any vehicle emit smoke in the house (Item 32) 44% of the students said they noticed it but thought it is not their responsibility, 29 % said they would do nothing in such a situation and 27% would tell others to rectify the problem. In this item the students were lacking initiative.

From table 4.1 itself it has been found that 33% of students used to sit in other place while they saw someone smoking nearby, 35% of the students reacted that they would tell such people to stop smoking and 32% would do nothing.

Regarding the mode of living it has been found that only 26% of the students travelled to the nearby places on foot, most of the students (42.5%) used bicycle and the remaining 31.5% of the students used to go to the nearby places by scooter.

Item 35 tried to find out the preferred choice of carry bags. It has been found that most of the students (46%) preferred plastic bags, 24% preferred paper bags and 29%students preferred jute bags.

With the help of item no 36 it was tried to know the nature of further use of plastic bags and it has been found that 35% threw it in the dustbin, 43% kept it for further use and 22% had collected it to sale to the scrap vendors.

The graphical representation of table 4.1 has been shown in figure-4.1.

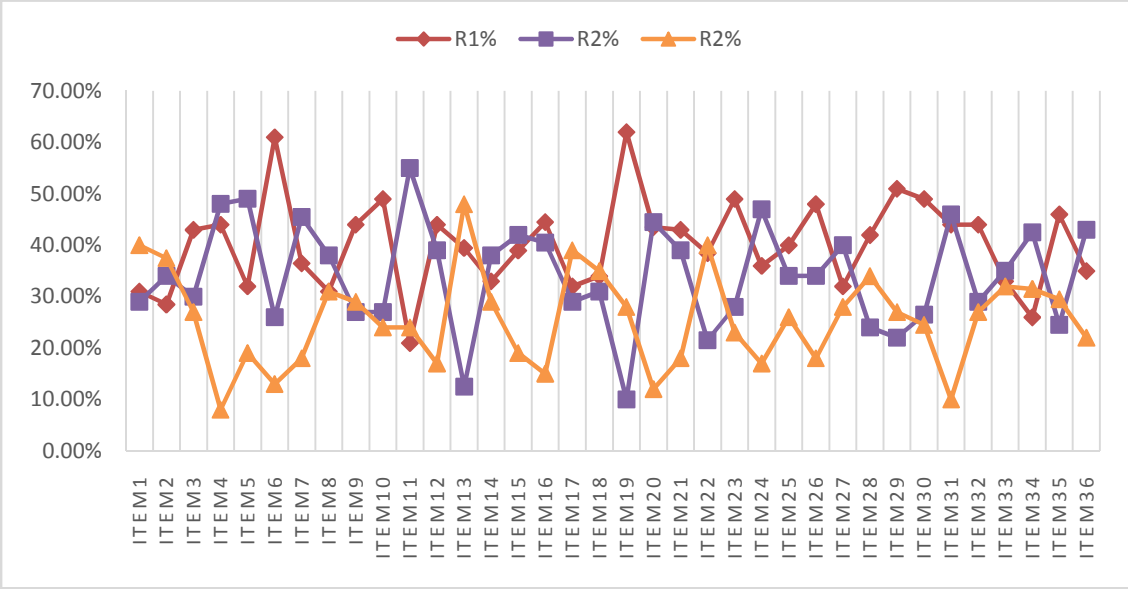

Figure- 4.1: The graphical representation of responses of the students' Pro - environmental Behaviour.

Objective 2: To study the pro-environmental behaviour of students.

Table 4.2: Pro -environmental Behaviour of the total sample

VERY GOOD	GOOD	AVERAGE	POOR	TOTAL
14 (7%)	50 (25%)	98 (49%)	38 (19%)	200 (100%)

Interpretation: Table 4.2 has shown that students' pro-environmental behaviour was concentrated more in the average category (49%) followed by good (25%) , poor (19%) and very good (7%). The graphical representation of table 4.2 has been shown in figure 4.2.

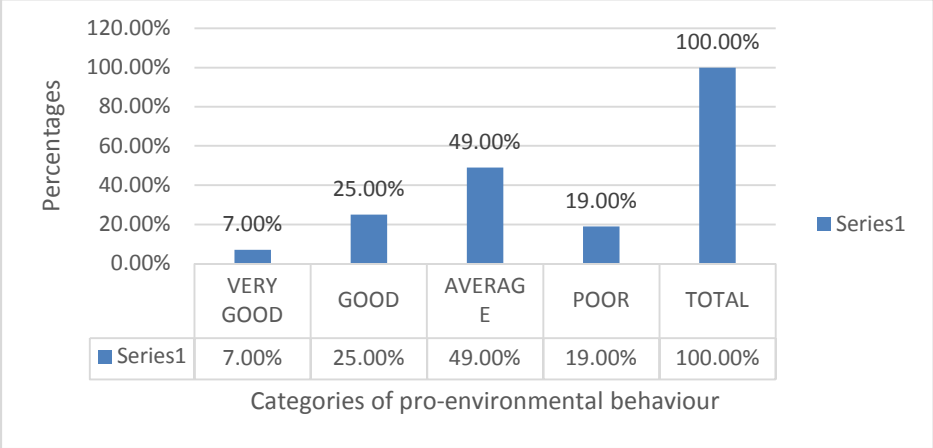

Figure-4.2: The graphical representation of Pro -Environmental Behaviour of the total sample

Objective 3: To compare the pro-environmental behaviour of the college students with respect to gender.

H_{01}. There exists no significant difference between the pro-environmental behaviour of boys and girls.

Table 4.3: Mean Rank of Gender wise Pro-environmental behaviour

Gender	N	Mean Rank
Boys	100	103.66
Girls	100	97.34

Interpretation: Table 4.3 has depicted that Mean rank of boy students regarding pro-environmental behaviour was ahead of the girl students. Further Mann- Whitney U test was applied to test the significance of gender difference on pro-environmental behaviour.

Table 4.4: Mann- Whitney U test showing the Gender wise comparison of Pro-environmental Behaviour

Group	N	Z	Sig. Value	Level of sig.
Boys	100	-0.833	0.405	0.05
Girls	100			

Interpretation: Table 4.4 has shown that the obtained Z value is -0.833. From the above table it is also seen that the significant value i.e. 0.405 has exceeded 0.05 and therefore the null hypotheses H_{01} can be accepted, that means that there exists no significant difference between the pro-environmental behaviour of boys and girls. It has proved that the difference that has shown by the descriptive statistics was only superficial.

Objective 4: To compare the pro-environmental behaviour of students with respect to streams.

$H_{02.}$ There exists no significant difference between the pro-environmental behaviour of students of Arts Stream and Science Stream.

Table 4.5: Mean Rank of Stream wise Pro-environmental behaviour of the students

Stream	N	Mean Rank
Arts	100	94.98
Science	100	106.02

Interpretation: Table 4.5 has depicted that Mean rank of students belonged to Science stream regarding pro-environmental behaviour was ahead of the students of Arts stream. Mann- Whitney U test was applied further whether the difference was significant or not.

Table 4.6: Mann- Whitney U test for showing the Stream wise comparison of Pro-environmental behaviour

Stream	N	Z	Sig. Value	Level of sig.
Arts	100	-1.455	0.146	0.05
Science	100			

Interpretation: Table 4.6 has revealed that the significant value is 0.146 and it is greater than 0.05. Therefore, the null hypothesis H_{02} can be accepted, that means that there existed no significant difference between the pro-environmental behaviour of the college students due to the difference of their stream i.e. Arts Stream and Science Stream. Difference of the stream has not created any difference in their pro-

environmental behaviour. The difference of pro-environmental behaviour on the basis of gender that was shown by the descriptive statistics was superficial only.

Objective 5: To see if there exists any relationship between environmental awareness and pro-environmental behaviour of total sample.

H_{03}: There exists no significant relationship between the environmental awareness and pro-environmental behaviour of college students.

Table 4.7: Pro-environmental behaviour of the College students in relation to their Environmental Awareness

Awareness	Pro-environmental Behaviour									
	Very Good	%	Good		Average		Poor		Total	%
Aware	4	2.00%	12	6.00%	28	14.00%	20	10.00%	64	32.00%
Less Aware	6	3.00%	20	10.00%	42	21.00%	8	4.00%	76	38.00%
Not aware	4	2.00%	18	9.00%	28	14.00%	10	5.00%	60	30.00%
TOTAL	14	7.00%	50	25.00%	98	49.00%	38	19.00%	200	100.00%

Interpretation: Table 4.7 has shown the pro-environmental behaviour of the students on the basis of their environmental awareness. The above table has shown that irrespective of different categories of environmental awareness the pro-environmental behaviour of the students was concentrated more on the average category. The above table has not shown that those students who have environmental awareness have very good pro-

environmental behaviour. Further χ^2 test was applied to see the significance of the relationship between Environmental Awareness and Pro-environmental Behaviour of the college students.

Table 4.8: χ^2 showing the relationship between Environmental Awareness and Pro-environmental Behaviour

Group	N	df	χ^2 value	Significant value	Level of significance
Environmental Awareness	200	6	10.934	0.09	0.05
Pro-environmental Behaviour					

Interpretation: Table 4.8 has shown that the χ^2 value is 10.934 and significant value is 0.09. This table has shown that the significant value is greater than 0.05 and therefore, the null hypotheses H_{03}, can safely be accepted. The table has revealed that that there existed no significant relationship between the environmental awareness and pro-environmental behaviour of college students.

Objective 6: To see if there exists any relationship between the environmental awareness and pro- environmental behaviour of college students with respect to gender.

H_{04}: There exists no significant relationship between the environmental awareness and pro-environmental behaviour of college students with respect to gender.

Table 4.9: Percentage analysis of the relationship between Environmental Awareness and Pro-environmental Behaviour due to Gender

	pro environmental behaviour									
environmental awareness	**Very good**	**%**	**good**	**%**	**average**	**%**	**poor**	**%**	**total**	**% total**
aware boys	2	1.00%	5	2.50%	14	7.00%	12	6.00%	33	17.50%
less aware boys	2	1.00%	10	5.00%	20	10.00%	3	1.50%	35	20.50%
not aware boys	2	1.00%	9	4.50%	15	7.50%	6	3.00%	32	16.50%
aware girls	2	1.00%	7	3.50%	14	7.00%	8	4.00%	31	15.50%
less aware girls	4	2.00%	10	5.00%	22	11.00%	5	2.50%	41	16.00%
not aware girls	2	1.00%	9	4.50%	13	6.50%	4	2.00%	28	14.00%
Total	14	7.00%	50	25.00%	98	49.00%	38	19.00%	200	100%

Interpretation: It has been observed from table 4.9 that irrespective of gender wise environmental awareness the pro-environmental behaviour of boys and girls were concentrated more on average category. However number of girls was slightly above of the boys' category. Further χ^2 test was applied to see the relationship between Environmental Awareness and Pro-environmental Behaviour due to Gender i.e. boys and girls.

Table 4.10: χ^2 showing the relationship between Environmental Awareness and Pro-environmental Behaviour due to Gender

Group	N	df	χ^2 value	Significant value	Level of significance
Gender wise Environmental Awareness	200	15	13.273	0.581	0.05
Gender wise Pro-environmental Behaviour					

Interpretation: In Table 4.10, it is seen that the χ^2 value is 13.273 and significant value is 0.581. The above table has shown that the significant value is greater than 0.05 level of significance which revealed that no significant relationship existed between environmental awareness and pro-environmental behaviour of the college students; due to gender and the null hypothesis H_{O4} can be accepted. Therefore it can be inferred from the result that gender wise environmental awareness of boys and girls in the present study and pro- environmental behaviour was independent of each other.

Objective 7: To see if there exists any relationship between the environmental awareness and pro- environmental behaviour of college students in relation to stream.

H_{05}: There exists no significant relationship between the environmental awareness and pro-environmental behaviour of college students with respect to stream.

Table 4.11: Percentage analysis of the relationship between Environmental Awareness and Pro-environmental Behaviour due to Stream

	pro environmental behaviour									
environmental awareness	Very good	%	good	%	average	%	poor	%	total	%
aware arts students	3	1.50%	9	4.50%	20	10.00%	6	3.00%	38	19.00%
less aware arts students	4	2.00%	8	4.00%	25	12.50%	4	2.00%	41	20.50%
not aware arts students	2	1.00%	8	4.00%	7	3.50%	4	2.00%	21	10.50%
aware science students	1	0.50%	3	1.50%	8	4.00%	14	7.00%	26	13.00%
less aware science students	2	1.00%	12	6.00%	17	8.50%	4	2.00%	35	17.50%
not aware science students	2	1.00%	10	5.00%	21	10.50%	6	3.00%	39	19.50%
total	14	7.00%	50	25.00%	98	49.00%	38	19.00%	200	100.00%

Interpretation: Table 4.11 has also shown that irrespective of stream wise environmental awareness the pro-environmental behaviour of the college students were

concentrated more on the average category. From the table it was seen that awareness of the students may not increase the pro-environmental behaviour. To see the significant relation between environmental awareness and pro-environmental behaviour on the basis of stream, χ^2test was applied.

Table 4.12: Awareness and Pro-environmental Behaviour due to Stream-Science and Arts

Group	N	df	χ^2 value	Significant value	Level of significance
Stream wise Environmental Awareness	200	15	30.682	0.010	0.05
Stream wise pro-environmental Behaviour					

Interpretation: From Table 4.12 it is seen that the χ^2 value is 30.682. The same table has shown that the significant value is 0.01 and it is less than 0.05 and therefore the null hypothesis $\mathbf{H_{05}}$ can be rejected. The result has indicated that there existed significant relationship between the environmental awareness and pro-environmental behaviour of college students with respect to stream.

CHAPTER- V

FINDINGS AND CONCLUSIONS

5.0 Findings of the Study:

The present chapter was devoted to provide the findings of the entire study and its summery which has already been reported to the previous chapters. On the basis of the statistical analysis and interpretation made in chapter IV, the researcher tried to discuss the findings of the study with reference to the research problem raised in the first chapter.

The major findings of the study according to the objectives of the study were stated as follows-

i. From the study it has been found that a meagre percentage of student's i. e. (31%) was aware of environmental pollution.

ii. In this study it was also revealed that majority of the students (37.5%) had no knowledge about pro- environmental behaviour. Likewise a very few percentage of students were having the knowledge of pro- environmental behaviour.

iii. Less than half of the students have put their responses in average category regarding college environment.

iv. The study was also found that the majority of the students were responded positively regarding the plantation programme in home or college, involvement on street play, pouring water on plants and see others damaging plants, flowers etc.

v. The study was revealed that most of the students have earned knowledge by reading environmental education which is a very positive sign for our society.

vi. Regarding the uses of electricity, the study had found that most of the students (46%) were not aware of it.

vii. From the study, it has found that most of the students were aware, regarding the uses of water. They like to use water according to their need which is very good for our environment. But there were also few students who were not concern about the use of water which is not good at all.

viii. Regarding the usage of plastics, the study was also found that an average number of students were aware about the negative impact of plastics; on the other hand few students even didn't care about it.

ix. The study has revealed that there existed no significant difference between the pro-environmental behaviour of boys and girls. It has proved that the difference that was found in the percentage analysis was only superficial.

x. The study also revealed that the students of Science stream are more aware than that of the students of Arts stream regarding pro- environmental behaviour (Ref. Table no. 4.5). Difference of the stream has not created any difference in their pro- environmental behaviour.

xi. From the analysis it has been found that there existed no significant relationship between the environmental awareness and pro-environmental behaviour of college students. There is a general conception that those students who have good environmental awareness are likely having good pro- environmental behaviour. But in the present study, there was no relationship between the above mentioned variables.

xii. The study also revealed that no significant relationship existed between environmental awareness and pro-environmental behaviour of the college

students, due to gender (Ref. table no.4 9). It can be inferred from the result that gender wise difference of environmental awareness and its relation to pro-environmental behaviour was not significant for the present study.

xiii. The result has indicated that there existed significant relationship between the environmental awareness and pro-environmental behaviour of college students with respect to stream. The students belonging to Science faculty have shown more aware.

So, from the study it has been found that more than half of the students have knowledge about pro- environmental behaviour among the whole population. Difference of the stream has not created any difference in their pro- environmental behaviour. Gender wise environmental awareness of boys and girls in the present study and pro- environmental behaviour was independent of each other. Awareness of the students may not increase the pro-environmental behaviour.

5.01 SUGGESTIONS FOR FURTHER STUDIES

- The present study was based only on the students of college level. It can be conducted at different level of education, like primary, high school, higher secondary level and university level.
- A comparative study can be prepared among the urban and rural students in different level of education.
- A study can be prepared on pro- environmental behaviour of teachers also.
- A study can be prepared on the B. Ed trainees of the B. Ed colleges.
- A comparative study can be constructed for further study on Arts and Science stream students from primary to secondary level.

- A comparative study can be made to see the environmental awareness and pro- environmental behaviour of students of different levels of education.

5.02 CONCLUSIONS:

Environmentally consciousness has become a global issue. It has become one the most important topics for discussion these days among most sections of society. Ranging from the level of primary classes to the highest academic sections, great stress is being laid on a variety of environmental issues. environmental studies has been measured as unavoidable topic in curriculum at secondary level of school, intend to provide the accurate kind of information and accessible information about environment for enhancing the sustainable eco- friendly or pro- environmental behaviour and attitudes among adolescents students. The definitive purpose of largely studies on pro-environmental behaviour is to contribute information that can be supportive in dropping the unenthusiastic impact of individual actions. The level of environmental responsibility increased the most in today. The main target of implementing various environmental programmes and initiatives is to increase the environmental awareness and environmentally friendly behaviour of every citizen.

This study investigated about the pro- environmental behaviour of the college students in relation to the environmental awareness. The result of the study, had found that more than half of the students have knowledge about pro- environmental behaviour among the whole population. Awareness of the students may not increase the pro-environmental behaviour. But there were also some students who had lack of knowledge regarding the pro- environmental behaviour which is not a good sign for our environment. So, it is very important to spread knowledge about pro- environmental

behaviour and environmental awareness especially among the youth of our nation to reduce the environmental pollution and make our environment more greenery and safe place to live in. We should try to teach every human being to protect our environment from the childhood.

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APPENDIX-A

PERSONAL DATA SHEET (PDS) FOR STUDENTS

INSTRUCTIONS: Some information of yours is needed for the research principle. Please, fill in the following information's:

NAME: .....

AGE: .....

SEX: .....

COLLEGE: .....

STREAM: .....

MEDIUM: .....

PLACE OF BIRTH: RURAL ☐ URBAN ☐

APPENDIX-B

QUESTIONNAIRE

ON

ENVIRONMENTAL AWARENESS

INSTRUCTIONS: Dear students, you are invited to participate in the survey through this questionnaire for getting the information and feedback from you. Your responses will be kept strictly confidential. You carefully read out the questions and give a tick mark to one of them according to your choice.

1. Do you have any knowledge about environment?
    a) Little knowledge ☐
    b) Average knowledge ☐
    c) No knowledge ☐

2. Do you know have any knowledge about awareness?
    a) Little knowledge ☐
    b) Average knowledge ☐
    c) No idea ☐

3. Do you have any knowledge about environmental awareness?
    a) Little knowledge ☐
    b) Average knowledge ☐
    c) No idea ☐

4. Does the environment of your home is hygienic?
    a) Little ☐
    b) Average ☐
    c) Poor ☐

5. Do you like the environment of your home?

a) Like ☐
b) Average like ☐
c) Not like ☐

6. Do you have any knowledge about environmental pollution?

a) Little knowledge ☐
b) Average knowledge ☐
c) No idea ☐

7. Do you plant tree in your home/college?

a) Plant when get time ☐
b) Plant in free time ☐
c) Not interested ☐

8. Do you earn any knowledge about environmental awareness by reading Environmental education as a subject of course?

a) Little knowledge ☐
b) Less knowledge ☐
c) Average knowledge ☐

9. Do you agree that our environment is being polluted day by day?

a) Totally agree ☐
b) Little agree ☐
c) Not interested ☐

14. What is your responsibility save your environment from pollution?

a) Plant maximum tree ☐
b) Stop to cut the trees ☐
c) No idea ☐

15. Are you aware about the environmental effects plastic is causing in the world?

a) Little aware ☐
b) Aware ☐
c) Not aware ☐

16. Would you like to be involved in an initiative?

a) Little interested to do ☐
b) Totally interested ☐
c) Not interested ☐

17. Should plastic be completely banned?

a) Should be banned ☐
b) Shouldn't be banned ☐
c) No idea ☐

18. What should be done to improve the air quality of our surroundings?

a) Plant more trees ☐
b) Strict punishment for law breaking ☐
c) others ☐

19. World Environment day is-

a) 4th June ☐
b) 5th June ☐
c) 6th June ☐

20. What type of crackers do you like to burst?

a) Having loud sound for longer time ☐
b) Having loud sound for shorter time ☐
c) Having less sound ☐

21. Are you informed about the increased green house gases in atmosphere?

a) Have never heard of this. ☐
b) Have little knowledge about it, but could not able to explain it. ☐
c) Familiar with this and would be able to explain well ☐

22. What do you like to keep in your mind while watching T. V. at home?

a) Concern about neighbours ☐
b) Always keep high volume ☐
c) Watch programmes with high volume ☐

23. Deforestation has adverse effects on the environment

a) Strongly agree ☐
b) Disagree ☐
c) Neither agree nor disagree ☐

24. Trees also play a critical role in absorbing the greenhouse gases that fuel global warming

a) Strongly agree ☐
b) Disagree ☐
c) Neither agree nor disagree ☐

25. Water resource is essential for livelihood and environment's health

a) Strongly agree ☐
b) Disagree ☐
c) Neither agree nor disagree ☐

26. Do you have any knowledge about environmental degradation?

a) Little knowledge ☐
b) Less knowledge ☐
c) No idea ☐

27. Do you agree with that the use of technology effect our environment badly?

a) Totally agree ☐
b) Neither agree nor disagree ☐
c) Disagree ☐

28. Do you agree that deforestation has adverse effect on environment?

a) Totally agree ☐
b) Neither agree nor disagree ☐
c) Disagree ☐

29. Do you agree that Environmental education helps to spread environmental awareness among the students?

a) Totally agree ☐
b) Neither agree nor disagree ☐
c) disagree ☐

30. Do you agree that the planet could be the better place for live by proper utilizing the environmental resources?

a) Agree ☐
b) Neither agree nor disagree ☐
c) Disagree ☐

31. Do you agree that over exploitation of natural resources by man has created a serious threat to survival a human being?

a) Totally agree ☐
b) Neither agree nor disagree ☐
c) Disagree. ☐

APPENDIX-C

QUESTIONNAIRE

ON

PRO- ENVIRONMENTAL BEHAVIOUR

INSTRUCTIONS: Dear students, you are invited to participate in the survey through this questionnaire for getting the information and feedback from you. Your responses will be kept strictly confidential. You carefully read out the questions and give a tick mark to one of them according to your choice.

1. Do you have any knowledge about environmental pollution?
    a) Little knowledge ☐
    b) Average knowledge ☐
    c) No knowledge ☐
2. Do you know have any knowledge about pro-environmental behaviour?
    a) Little knowledge ☐
    b) Average knowledge ☐
    c) No idea ☐
3. Do you plant trees, flowers in your home or college?
    a) Plant trees/flowers at home ☐
    b) Plant trees/ flowers at college ☐
    c) Not interested ☐
4. What is the environment of your college?
    a) Good ☐
    b) Average ☐
    c) Not good ☐

5. Do you use the dustbin of your college?
    a) Little Used ☐
    b) Use wherever needed ☐
    c) Not interested ☐

6. If you see any children damaging plants, flowers, lawn or leaves in anywhere then what you will do?

   a) Stop them and convince them not to do so. ☐
   b) Ignore it ☐
   c) Do the same. ☐

7. If any plant is dying in your home due to lack of water what you will do?

   a) Will tell other to pour water ☐
   b) Will pour water myself ☐
   c) Will ignore it. ☐

8. Do you earn any knowledge by reading Environmental education as a subject of course?

   a) Little knowledge ☐
   b) Less knowledge ☐
   c) Average knowledge ☐

9. If plantation is going on in your college/society, will you interest to participate on it?

a) Will participate ☐
b) Feel ashamed to participate ☐
c) Not interested ☐

10. If you see someone is cutting green tree then what will you do?

a) Notice it but will do nothing ☐
b) Will stop him and convince him ☐
c) Will complaint against him to the local authority ☐

11. If any animal is damaging the plants inside your college then what will you do?

a) Will push it out with the help of friends ☐
b) Will tell the chowkidar to push it out ☐
c) Notice it but will do nothing. ☐

13. If you see any child catching butterfly, ant or flies then what will you do?

a) Tell them to stop ☐
b) Will do the same ☐
c) Will do nothing ☐

14. If you see any injured bird then what will you do?

a) Will pick it and apply treatment ☐
b) Notice it but will not do anything ☐
c) Will tell other for treatment ☐

15. If there is loud sound of speaker in your locality, what will you do?

a) Tell the people to stop it ☐
b) Tell them to reduce the volume ☐
c) Will bear it ☐

16. What type of crackers do you like to burst?

a) Having loud sound for longer time ☐
b) Having loud sound for shorter time ☐
c) Having less sound ☐

17. Are you interested to join in any street play on environment organize by college or society?

a) Interested ☐
b) Ashamed to participate ☐
c) Not interested ☐

18. What do you like to keep in your mind while watching T. V. at home?

a) Concern about neighbours ☐
b) Always keep high volume ☐
c) Watch programmes with high volume ☐

19. If you see water tap is left open and water is flowing waste in home/college what you will do?

a) Stop it, both at college and at home ☐
b) Tell others to close it ☐
c) May not take seriously in college ☐

20. How do you use water during brushing teeth?

a) Take water in mug according to the need ☐
b) While brushing teeth, close and open the tap according to the need ☐
c) Keep tap open during full time of brushing teeth ☐

21. How do you use water during bathing?

a) According to need take water in the bucket ☐
b) While bathing close and open the tap according to need. ☐
c) Keep tap open during full time of bathing ☐

22. If water is left in your water bottle then what you will do to the remaining water?

a) Pour water on the plants if available ☐
b) Often waste it ☐
c) Water the plants consciously ☐

23. If the water tank of your college/home is getting full and is over flowing then what you will do?

a) Will tell chowkidar to stop it ☐
b) Will try to stop myself ☐
c) Notice it but will not take it seriously. ☐

24. If some children are playing with running water pipe in the park then what you will do?

a) Will stop them ☐
b) Will do nothing ☐
c) I will also start playing with them ☐

25. If you eat chocolate, chips, snacks etc, and there is no dustbin nearby, what you will do for the wrappers?

a) Will go the place where garbage is already collected and will throw the wrappers there ☐
b) Will throw anywhere ☐
c) Will keep it with myself till I find the dustbin ☐

26. If you see paper piece, polythene, chocolate wrapper in college ground then what you will do?

a) Tell the chowkidar to clean it ☐
b) Notice it but will do nothing ☐
c) Will clean it along with friends ☐

27. If you are travelling by bus or train and somebody is smoking then what you will do?

a) Tell him to stop it ☐
b) Will sit at some other place ☐
c) Will do nothing ☐

28. If you are going out with your family then what you will do to fans, bulbs etc, in the home?

a) Will switch off if noticed ☐
b) Will think that switching them off is elder's responsibility ☐
c) Will switch of myself if every time with responsibility ☐

29. If your mother gives you two hours to watch television then for how many hours you will watch it?

a) More than two hours ☐
b) Two hours ☐
c) Less than two hours ☐

30. What you will do on entering the room during day time?

a) Open the window ☐
b) Switch on the tube light ☐
c) Open the window along with the light ☐

32. If any vehicle in your house is giving smoke then what you will do?

a) Notice it but will not feel it my responsibility ☐
b) Will do nothing ☐
c) Tell to rectify the problem ☐

33. If someone smoke in bus or train during travelling what will you do?

a) Will tell him to stop it ☐
b) Will sit at other place ☐
c) Will do nothing ☐

34. If you have to go to your friend's house which is not very far, then how will you go?

a) By walking down the distance ☐
b) By bicycle ☐
c) By bike/scooter ☐

35. Plastic bags preferred by me, one made of:

a) Plastic ☐
b) Paper ☐
c) Jute ☐

36. What do you do for the polythene bags after you bring it from the market?

a) Throw it in dustbin ☐
b) Keep it for further use ☐
c) Collect it to sell to scrap vendor ☐