# ENVIRONMENTAL AUDIT REPORT 2021-22

**BABA BHAIRABANANDA AUTONOMOUS MAHAVIDYALAYA**
**CHANDIKHOLE,JAJPUR,ODISHA-755044**

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# Chapter-I

## INTRODUCTION

### 1.1. Baba Bhairabananda Autonomous Mahavidyalaya at a Glance:

Baba Bhairabananda Autonomous Mahavidyalaya, Chandikhole, Jajpur, Odisha was established in the year 1976 on the foot hill of Varunabanta with greenery and scenic environment. It is a leading college in the state of Odisha affiliated to Utkal University, Bhubaneswar and catering to educational needs of around 3500 students with rural and tribal origin. It has been duly recognized by the UGC under Section 2(f) and Section 12(B) of the UGC Act. The college has already been Re-accredited with B grade by National Assessment and Accreditation Council (NAAC) in the year 2015.The college has also been conferred Autonomous status by UGC in the year 2017.

The College connects 6 (six) adjacent districts of the state and remains in the vicinity of the largest industrial hub KALINGA NAGAR. It is located at a distance of 25 Kms from the diamond triangle Lalitagiri-Ratnagiri-Udayagiri with their Buddhist relics. It has attracted the attention of the learners of the entire state due to its commendable success at various levels of examinations and unique sense of discipline, punctuality, unity, honesty, accountability and best practices. The biggest asset of College is its team of dedicated teaching and non-teaching staff members of around 120 whose continuous and sincere efforts have helped the college to pass through 46 years in materializing the goals of economically weaker students.

### 1.2. **About Environment Audit:**

Auditing is an evaluating system of college in terms of internal controls for achieving desired goals. The steps of the auditing processes are most crucial include planning; work on the ground, creating the audit report and follow-up. In addition to providing education, colleges are dedicated to protecting the environment by minimizing negative effect such as lowering thrash, water, energy uses etc. The main goal of the environment audit is to examine ongoing college procedures whose actions may be detrimental to the environment, health of the students and welfare of the entire work force. In order to attain environmental sustainability, improved environmental principles have come into practice. In this connection, comprehensive procedures of on-site observation and verification are included in the planning and preparation for the environment audit.

## 1.3. **Objectives behind the Conduct of Environment Audit:**

A conducive environment is very essential for harmonious and healthy living. The most important elements of a good environment are clean air, water and contamination free soil. People generally harm the environment to satisfy their selfish ends. This has caused a huge harm in the forms of climate change and environmental pollution. The water and air of many places of the world has become polluted to such extent that the people of those areas are struggling to survive. Indiscriminate use of synthetic chemicals in the forms of fertilizers and pesticides in modern agricultural practices has contaminated the crop products which are moving successively to different levels through food chains causing severe health hazards. Environmental sustainability, therefore, is the need of the hour. If we do not take care of our environment, our future sustenance will be at stake. It is the responsibility of certain authorities or agencies to look after environment. There are many organizations who look after the issues related to environment. But without peoples' participation it is not possible to manage environmental problems. In this regard, each and every institution has a very important role to play. Energy and water use practices, waste management practices, source of water in use, source of energy in use, maintenance of campus ambience, resource conservation attitude and above all the environmental consciousness among the individuals are some aspects about which each and every institution should think, ponder and act in order to infuse the environmental responsibility within the college campus.

# Chapter-II

## OBJECTIVES

2.1. The objectives of environment audit are vital for the self evaluation of the college since they represent their involvement in addressing the environmental problems on the campus. The following are the broad objectives of the environment audit:

1. To create a green and plastic free campus.
2. To improve awareness towards environmental responsibilities.
3. To examine land use for various purposes in college campus.
4. To evaluate floral and faunal diversity in the college premises.
5. To measure the degree of noise in the college campus.
6. To examine solid waste management practices.
7. To examine the electrical power consumption in college.

# Chapter-III

## DATA ANALYSIS

3.1. **Promotion of Green Campus**:

A greenery college campus is essential for the all round growth and development of student's life. The college is surrounded by scenic, serene and sublime ambience. In addition to this, the college campus has a colorful environment that has created several green spaces. Various initiatives have been undertaken for the promotion of green campus in the college as follows:


Figure-1: Different Tree Species at College Campus


Figure-2:Different Tree and flower Species at College Campus


Figure-3:Different Tree and flower Species at College Campus


Figure-4: Different Tree and flower Species at College Campus

3.2. Plastic Free Campus initiative:


Figure-5: Plastic Free Campus Initiative

3.3. **Campus Cleaning Activities**:

Figure-6: Campus Cleaning Activity at College Campus on 12.08.2021

Figure-7: Campus Cleaning Activity at College Campus on 11.08.2021

Figure-8: Campus Cleaning Activity at College Campus on 12.08.2017

Figure-9: Campus Cleaning Activity at College Campus on 12.08.2018

Figure-10: Campus Cleaning Activity at College Campus on 20.08.2017

Figure-11: Campus Cleaning Activity at College Campus on 10.08.2018

Figure-12: Campus Cleaning Activity at College Campus on 12.08.2018

Figure-13: Campus Cleaning Activity at College Campus on 12.08.2021

3.4. **Plantation Activities**:

Figure-14: Plantation Programme at College Campus on 12.08.2018

Figure-15: Plantation Programme at College Campus on 26.12.2017

3.5. **Environmental Awareness Activity:**

Figure-15: Environmental Awareness Activity at College Campus on 10.08.2019

3.6.**Solid Waste Management:**


Figure-16: Solid Waste Dustbin


Figure-17: Designated Solid waste Dumping Site


Figure-18: Installation of Sanitary Napkins Incinerator in Ladies Hostel

3.7. **Flora Diversity in the College Premises**:

Trees are planted with the objective of declining atmospheric carbon dioxide. The green floral diversity of the college campus effectively maintains the soil, offers habitat for both diurnal as well as nocturnal animals, provides cover for invertebrates and protects students from summer heat waves. Ornamental trees are planted to maintain aesthetic qualities. The following are different floral species at college campus:

| SI NO | BOTANICAL NAME | COMMON NAME |
|---|---|---|
| 1. | ACACIA SENEGEL | GUM TREE |
| 2. | ACACIA RUGATA | SHIKARAT SOAP POD |
| 3. | ACALYPHA INDICA | ACALIPHA |
| 4. | ABRUSHPRECATORIUS | INDIAN LIQUORICE |
| 5. | ACHYRANTHES ASPERA | PRICKLY CHAFF-FLOWER |
| 6. | ADHATODA VASICA | MALABARNET-TRICE |
| 7. | AEGLE MORMELOS | WOOD APPLE |
| 8. | AMORPHOPHALUS CAMPANULATUU | ELEPHANT FOOT YAM OR TARO |
| 9. | ANACARDIUM OCCIDENTAL | CASHEWNET |
| 10. | ANNONA SQUAMOSA | CUSTARD APPLE |
| 11. | ARECA CATECHU | BETEL-NUT |
| 12. | ARTOCARPUS INTEGRIFOLIA | JACK-FRUITS |
| 13. | ASPARAGUS RACEMOLUS | ASPARAGUS FERN |
| 14. | AECAESHYNOMENE ASPERA | SHOLA |
| 15. | AGERATUM COHYZOIDES | GOAT WEED |
| 16. | ANDROPOGON ACICULATA | GUGUCHIA |
| 17. | ANTHOCEPHALUS INDICUS | KADAM |
| 18. | ASTEVACANTHA LONGIFOLIA | KOILIKHIA |
| 19. | AZADIRACHATA INDICA | NEEM |
| 20. | BAUHINIAVARIEGATA | MOUNTAIN EBONY |

| | | |
|---|---|---|
| 21. | BOMBAX MALABARIUM | SILK COTTON |
| 22. | BOUGAIN VILLEA SPECTABILIS | GLORY OF THE GARDEN |
| 23. | BRYOPHYLLOUMCALYCINUM | CATHEDRAL BELLS |
| 24. | BUTEA MOROSBREMA | PALASAHLAI OR FLAME OF THE FOREST |
| 25. | CAESALPINIA PULCHERRIMA | DWARF GOLD MOHUR |
| 26. | CANNA INDICA | INDIAN SHOT |
| 27. | CAPPARIS ZEYLALICA | CAPER |
| 28. | BOERAVIA NIVEA | RAMIE |
| 29. | CALAMUS TENUIS | CANE |
| 30. | CALOTROPIS PROCERA | WHITE ARAKHA OR MADAR |
| 31. | CASSIA OSIDENTALIS | CASSIA |
| 32. | CEOQUS OFOOARA | CEDAR ON HIMALAYAN |
| 33. | CENTELLA ASIATICA | INDIAN PENY WORT |
| 34. | CLITORIA ASIATICA | BUTTERFLY PEA |
| 35. | COLOCASIA ESCULENTA | ARUN,TARO |
| 36. | CYCAS REVOLUTA | CYCAS |
| 37. | CYNODON DACTYLON | LAWN GRASS |
| 38. | CYPERUS ROTUNDUS | NUT GRASS |
| 39. | CARICA PAPAYA | PAPAYA |
| 40. | CASSIA FISTULA | GOLDEN SHAWER |
| 41. | CEPHALENDRA INDICA | LVY GOURD |
| 42. | CESTRUM NOCTURNUM | NIGHT JASMINE |
| 43. | CHRYSANTHEMUMCORINARIUMCORINARIUM | GARDEN DAISY |
| 44. | CITRUS LEMON | LEMON |
| 45. | CLEOM VESCOSA | STICKY CLEOME |
| 46. | CUCUMBA AMADA | MANGO GINGER |
| 47. | CUSCUTA REFLEXA | DODDER |
| 48 | DATURA STRAMONIUM | DUDURA |
| 49 | DELONIX REGIA | GOLD MOHAR |
| 50 | DIGITALIS PURPUREA | FOXGLOVE |
| 51 | DIASCOREA ALOTA | YAM |
| 52 | DURANTAPLUMIERI | GARDEN HEDGE PLANT |
| 53 | ELETTARIA CARDAMOMUM | CRDAMON |
| 54 | EMBILICA OFFICIALIS | INDIAN GOOSEBERRY OR AMLA |
| 55 | EUKALYPATUS GLOBULUS | TASMANIAN BLUEGUM |
| 56 | PHERUNIA ELEPHANTUM | WOOD APPLE |
| 57 | FICUS BENGANALIS | BANYAN |
| 58 | FICOUS RELIGIOUS | PIPUL TREE |
| 59 | FICUS GLUMERATA | CLUSTER FIG TREE |
| 60 | ERAGROSTIS CYNOSUROIDES | HOLY GRASS |
| 61 | EVOLVULUS | BICHHAMALIA |
| 62 | LAPORTEA INTERRUPTA | HEN'S NETTLE |

| | | |
|---|---|---|
| 63 | GMELINA ARBOTEA | GAMBHARI OR WHITE TEAK |
| 64 | GREWIA TILLIFOLIA | DHAMANI |
| 65 | GYNANDROPSIS PENTAPHYLLA | ANASORISHA |
| 66 | HIBISCUS ROSASINANSIS | CHINA ROSS |
| 67 | IMPATIEMS BALSAMINA | GARDEN BALSAM |
| 68 | IXORA COCCINEA | FLAME OF THE WOOD OR JUNGLE GERANIUM |
| 69 | JASMINUM SAMBAC | ARABIAN JASMINE |
| 70 | JATROPHA GOSSYPIFOLIA | BELLYACHE BUSH |
| 71 | LEUCAS | THUMBAI |
| 72 | MANGIFERA INDICA | MANGO TREE |
| 73 | HEMIDEMUS INDICUS | INDIAN SARSA PARILLA |
| 74 | HYGROPHIA SPINOSA | MARSH BARBEL |
| 75 | IPOMOEA CARNEA | BUSH MORNING |
| 76 | LAWSONIA INERMIS | HENNA TREE |
| 77 | MARYNIA DIANDRA | DEVILS CLAW |
| 78 | MARSELIA QUADRIFOLIA | WATER CLOVER OR PEPPERWORT |
| 79 | MENTHA VERIDIS | SPEARMINT |
| 80 | MIMOUSA PUDICA | SENSITIVE PLANT |
| 81 | MUSA V PARADISIACA | BANANA |
| 82 | LYCOPESICUM ESCULENTUM | TOMATO |
| 83 | OPUNTIA MONACANTHA | DROOPING PRICKLY PEAR |
| 84 | OXALIS CORNICULATA | CREEPING WOOD SORREL |
| 85 | POLYALTHIA LONGIFOLIA | FALSE ASHOKA |
| 86 | PROSOPSIS SPICIGERA | GHAF |
| 87 | PUNICA GRANATUM | POME GRANATE |
| 88 | TRIDEX PROCOMCUBENS | TRIDAX |
| 89 | ZIZIPUS OENOPHILA | KANTEIKOLI |
| 90 | MIMOSA HIMALAYANA | KUCHIKANTA , OR SEGA JANUM |
| 91 | MIRABILIS JALAPA | FOUR-O-CLOCK |
| 92 | MORMODICA COCHINCHINENSIS | DA GAC OR SPING BETTER CUCUMBER |
| 93 | MORINGA OLEIFERA | ORUMSTICK TREE |
| 94 | MURROYA PANICULATA | ORANGE JASMINE |
| 95 | MURRAYA KOENIGII | BERUSUNGA |
| 96 | OCIMUM SANCTUM | GUAVA |
| 97 | RAUWOLFIA SERPENTINA | INDIAN SNAKEROOT |
| 98 | SANTALUM ALBUM | INDIAN SANDALWOOD |
| 99 | SHOREA ROBUSTA | SAL TREE |
| 100 | TECTONA GRANOIS | TEAK |
| 101 | TINOSPORA CORDIFOLIA | GUDUCHI |
| 102 | VINCA ROSEA | CAYENNE JASMINE |
| 103 | ZIZIPUS JUJUBA | COMMOM JUJUBE |
| 104 | TERMINALIA ARGUN | ARJUN TREE |

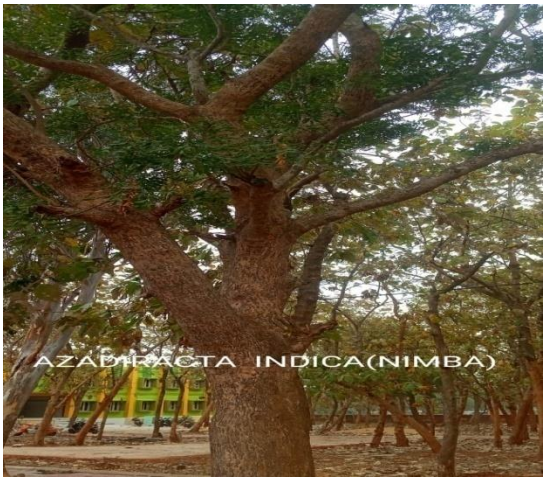

Figure-19


Figure-20


Figure-21


Figure-22


Figure-23

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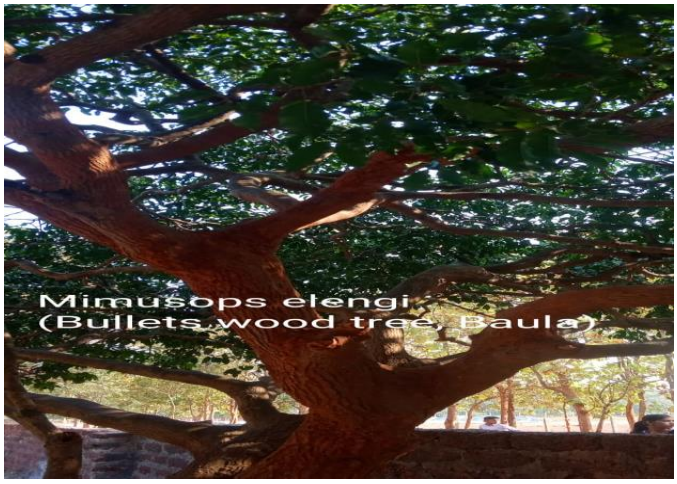


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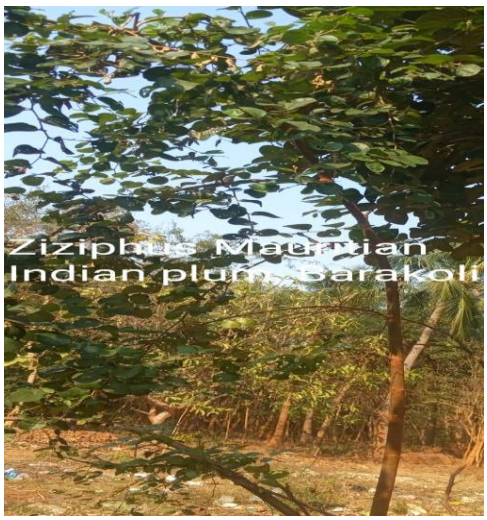


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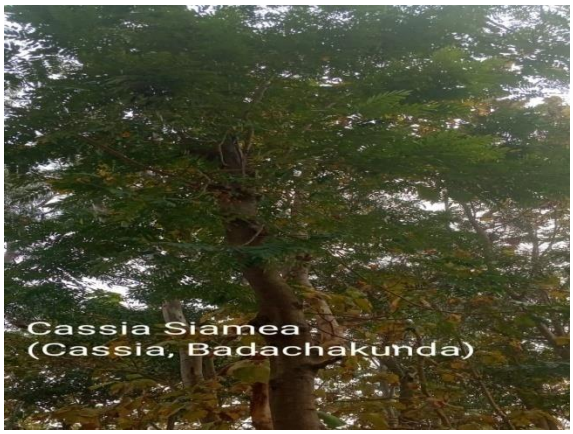


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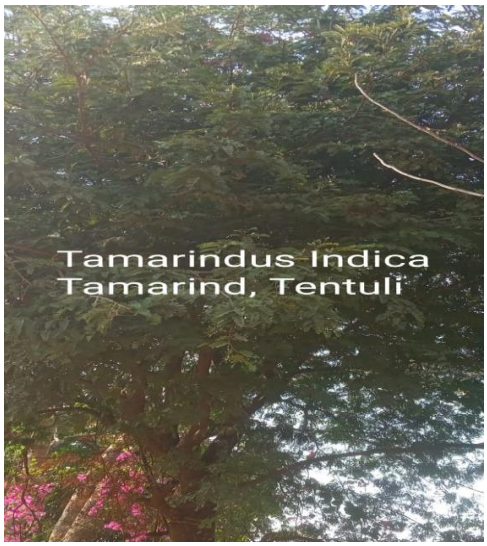


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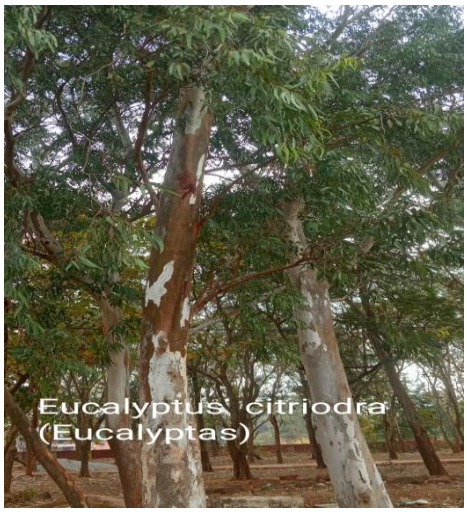


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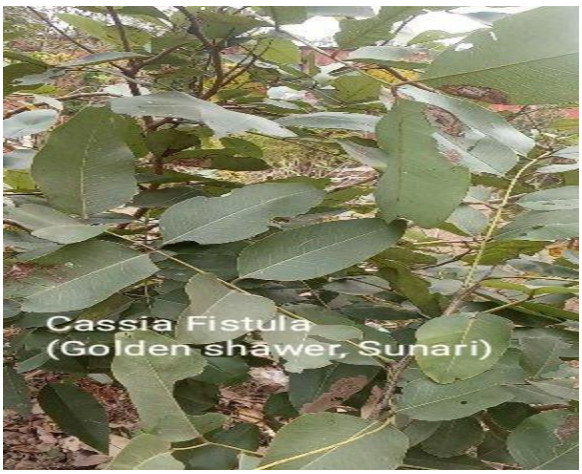


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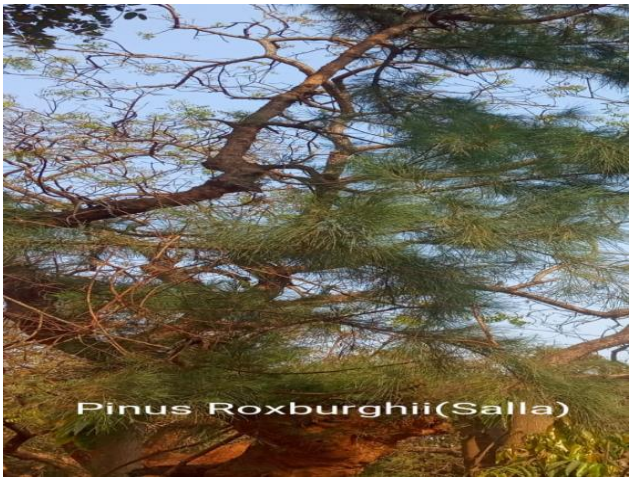


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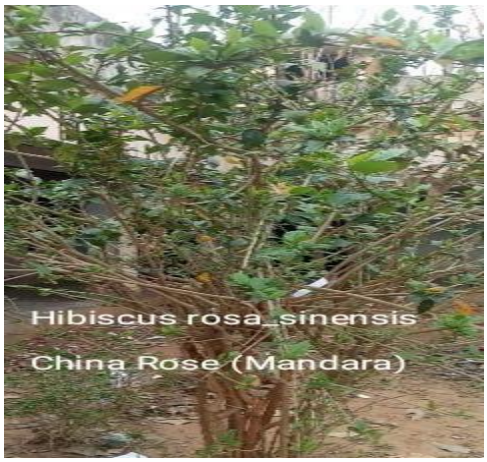


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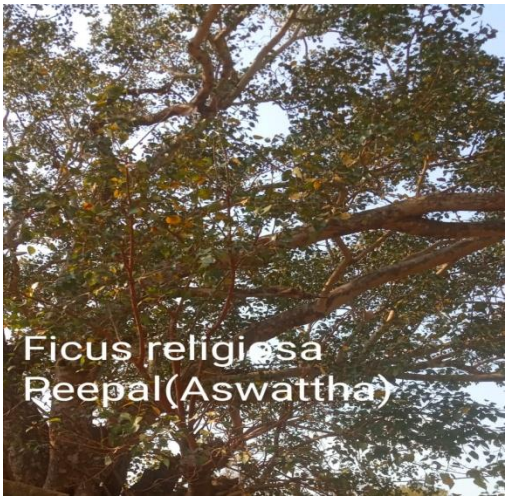


Figure-56

3.8. **Faunal Diversity in the College Premises:**

The faunal diversity consists of both invertebrates and vertebrates. Invertebrates have occupied every ecological niche. Vertebrates depend on invertebrates for food. It is so essential to record their existence of balance of nature. The fauna species are as follows:

ANNELIDA

| Common Name | Zoological Name |
|---|---|
| Earth Worms | Pheritima Posthuma |
| Nereis | Nereis vireus |

ARTHROPODS

| Common Name | Zoological Name |
|---|---|
| scorpion | Hottentottatamulus |
| termites | Odontotermeshorni |
| locust | Cyrtacanthacris succinate |
| Honey bee | Apis indica |
| Dragon fly | Anax indicus |
| Butter fly | Rhopalocera |
| Cricket | Acheta domestica |
| Centipedes | Scolopendraamajonica |
| Millipedes | Julus terrestris |
| Earwig | Forficula Auricularia |
| Green stink bug | Negara viridule |
| Blista beetles | Mylabris pustulate |
| Fire fly | Luciola pracusta |

| | |
|---|---|
| Ant | Meranoplusbicotor |
| Dung beetle | Scarabacussacer |
| Spiders | Anepsionmaritatusm |
| Wasp | Ropalidia marginata |
| Silver fish | Lepisma saccharina |

AMPHIBIANS

| Common Name | Zoological Name |
|---|---|
| Toad | Bufo Melanostictus |

REPTILES

| Common Name | Zoological Name |
|---|---|
| Garden lizard | Calotes versicolor |
| Monitor lizards | Varanus monitor |
| House wall lizard | Hemidactylus flaviviridis |
| Indian python | Python modurus |
| Cobra | Naja naja |
| Krait | Bungarus caeruleus |
| Russel's viper | Viperarusselli |
| Rat snake | Plyasmucosus |
| Green vine snake | Ahaetulla nasuta |
| Mono cellate cobra | Naja kaouthia |
| King cobra | Ophiophagus hannah |
| Saw scaled viper | Echismerrem |
| chameleous | Chamaeleozeylanicus |

BIRDS

| Common Name | Zoological Name |
|---|---|
| Pigeon | Columba livia |
| Crow | Corvus splendens |
| Weave bird | Ploeciousphilippinus |
| Myna | Acridotheres tristis |
| Parrot | Psittaculaeupatria |
| Koel | Eudynamisscolopaceus |
| Kite | Haliastei Indus |
| Owls | Bubo Bubo |
| Peacock | Pavo cristatus |
| Wood pecker | Dendrocopusmahrattersus |
| Indian roller | Coracias benghalensis |
| Greater coucal | Centropus sinensis |
| Green beeeater | Meropsorientalers |
| Drongo | Dicrurus bracteatus |
| Bul bul | Pycnonotuscofer |
| sparow | Passer domesticus |

MAMALS

| Commom name | Zoological name |
|---|---|
| Fox | Vulpes bengalensis |
| Dog | Canis familiaris |
| Flying Fox (Bat) | Pteropus giganteus |
| Bat | Kervoulapicta |
| Mole (Talpa):- | Parascaptorleucura |
| Rat | Bandicota bengalensis |
| Three striped squirrel | Funambulus palmarum |
| Wild rabbit | Lepus nigricollis |
| Monkey | Macaca mulatta |
| Langur | Presbytis entellus |
| Armadillo | Dasupusnovemainus |
| Porcupine | Hystrix indica |
| Black rat | Rattus rattus |
| Mongoose | Herpestesedwardsi |
| Barking deer | Cerulusmuntiac |
| Wolf | Canis lupus |
| Striped hyaena | Hyaena striato |
| Squirrel | Rodentia Sciurus |

Monkey (Macaca Mulatta)
Figure:57

Squirrel (Rodentia Sciurus)
Figure:58

# Chapter-IV

# Conclusion

Environmental auditing is the process of identification and determination of the institution's practices in creating awareness and practicing the environment friendly measures. Over the period of time overexploitation of resources like energy, water etc. have resulted in the environmental degradation. It is necessary to check whether our ways of living and handling resources are not going to cause detrimental effects in our surroundings.

An environmental audit is a snapshot in time in which one assesses campus performance in complying with applicable environmental laws and regulations. Though it is a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. It aims at summarizing the college's contribution and its activeness in creating awareness and consciousness in practically applying the environmental friendly measures towards an institute.

It is concluded that various types of trees including blooming plants, medicinal plants, fruit plants, local variants etc are found in the college campus. Moreover different type of animals including monkeys, birds, butterflies etc contribute to the college campus as unique biodiversity. Other factors such as the quality of the ambient water and air are within the permitted ranges. Natural light and ventilation is sufficient in college campus.

# Chapter-V

## Recommendations

The following are some of the significant recommendations for improving campus environment:

1. An E-Waste collection management system in the campus should be set up.
2. Water meter should be installed.
3. Solid waste should be reused or recycled at maximum possible places.
4. All the CFL bulbs must be replaced by LED bulbs or tubes.
5. More solar panels should be installed at college campus.

Ambika Prasad Mishra

Internal Auditor
(Mr. Ambika Prasad Mishra)

3/4/24

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