



विश्वजीवनामृतं ज्ञानम्



Sustainability Report

**ABV- Indian Institute of Information
Technology & Management Gwalior**

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Sustainability

The definition of “sustainability” is the study of how natural systems function, remain diverse and produce everything it needs for the ecology to remain in balance. It also acknowledges that human civilisation takes resources to sustain our modern way of life. There are numerous examples in human history where a civilisation has damaged its own environment and seriously affected its own survival chances. Sustainability considers how we might live in harmony with the natural world around us, protecting it from damage and destruction. In a typical educational institute, the sustainability assumes greater significance since we are a community of both learners and teachers who can impact the environment and get affected by the environment!

We now live in a modern, consumerist world shaped by technology surrounding us. We consume a lot of natural resources every day. In our urban centres, we consume more power than those who live in rural settings. We must be sensitized towards sustainable living- it is estimated that we use more resources every year than we can put back and that needs to change. Sustainability and sustainable development focus on balancing that fine line between competing needs - our need to move forward technologically and economically, and the needs to protect the environments in which we and others live. Sustainability is not just about the environment, it's also about our holistic health as a society in ensuring that no people or areas of life suffer as a result of environmental degradation and it's also about examining the longer term effects of our actions. We have to continuously ask ourselves- How do we improve?

Three Pillars of Sustainability

In 2005, the World Summit on Social Development identified three core areas that contribute to the philosophy and social science of sustainable development. These “pillars” in many national standards and certification schemes, form the backbone of tackling the core areas that the world now faces. The Brundtland Commission described it as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. We must consider the future then, in making our decisions about the present.

Economic Development

This is the issue that proves the most problematic as most people disagree on political ideology what is and is not economically sound, and how it will affect businesses and by extension, jobs and employability. It is also about providing incentives for businesses and other organisations to adhere to sustainability guidelines beyond their normal legislative requirements. Also, to encourage and foster incentives for the average person to do their bit where and when they can; one person can rarely achieve much, but taken as a group, effects in some areas are cumulative.

Social Development

There are many facets to this pillar. Most importantly is awareness of and legislation protection of the health of people from pollution and other harmful activities of business and other organisations. It is also about maintaining access to basic resources without compromising the quality of life. The biggest hot topic for many people right now is sustainable housing and how we can better build the homes we live in from sustainable material. The important element is education - encouraging people to participate in environmental sustainability and teaching them about the effects of environmental protection as well as warning of the dangers if we cannot achieve our goals

Environmental Protection

We all know what we need to do to protect the environment, whether that is recycling, reducing our power consumption by switching electronic devices off rather than using standby, by walking short journeys instead of taking the bus. Businesses are regulated to prevent pollution and to keep their own carbon emissions low.. Environmental protection is the third pillar and to many, the primary concern of the future of humanity. It defines how we should study and protect ecosystems, air quality, water quality, integrity and sustainability of our resources and focusing on the elements that place stress on the environment

It is our philosophy to adopt the concepts of sustainability in our campus, the way we educate students and the way we impact our surrounding.

Following are some of the initiatives we have undertaken

Energy efficient appliances usage are replacing conventional appliances



Example of Energy efficient appliances usage are replacing conventional appliances.

Description:

In New buildings constructed, namely Deptl. Block-5, Computational hub, Lecture theatre-2 , Learning Resource Center, Guest house, School, Bank and Post office, and faculty houses all are provided with LED energy saving light fittings. Street lights recently provided street lights (60 poles). All are LED energy saving light fittings.

In old buildings and street light, replacement is being done with energy saving light fittings and fixtures.

Smart Building implementation



The Automatic Fire Alarm Sensor System (Red in color)

Description:

Automatic fire alarm systems are installed in recently completed buildings. Provision is kept for buildings under construction (like Convention center)

Renewable energy produce inside campus

 A tall, white, modern street light pole with a solar panel mounted on top. The pole is situated on a grassy area with trees and a building in the background. A blue sign is attached to the base of the pole.	 A large solar panel mounted on a metal frame, tilted towards the sun. The panel is located in an open field with trees in the background. A date stamp '01 07 2017' is visible in the bottom right corner.
Solar street light	Solar Panel for submersible pump (ABV IIITM GWALIOR M.P.)
 A large solar water heater system consisting of several rectangular solar collectors mounted on a metal frame on a flat roof. A yellow cylindrical tank is visible in the background.	
Solar water heater	

Description:

- Extensive tree plantation.
- Deployment of solar submersible pumps. & solar water heaters.
- Use of electric operated cart.
- Waste Management System – systematic collection, transportation and dumping of garbage.
- Conversion of garbage into organic manure.
- Self sufficiency in organic manure needs.

Preservation of rich biodiversity

We commit ourselves to use our capabilities to improve the sustainability of our campus where we live, learn, and work.

Elements of green building implementation as reflected in all construction and renovation policy



Natural Ventilation



Natural light

Descriptionn:

All Academic, Administrative, hostels and residential buildings are designed in such a way that it allows maximum natural light in day time and for almost 80% of working hours.

All buildings are designed in such a way that windows are provided in at least two walls of each room. This allows natural light and circulation of air all across the rooms and halls.

Air conditioning system



Description:

There are two HVAC plants of 250t and 500t capacity. Both are provided with equipment of maximum efficiency.

Environmental Awareness



Workers are also involved in publicity campaign

Description:

Computers are provided to almost all Faculty, officers and staff to avoid /minimize use of papers. All research labs. Also provided 100% with computers

Soft copy versions of all correspondence, letters, notices, photos etc are accepted.

Use of plastic cups, containers, bags, packing etc are not allowed in cafeterias , hostel mess and other buildings in the campus.

Awareness programs are held in which even workers are involved in which they are told ill effects of using plastic.(Photo above)

Toxic waste



Toxic Waste Handled carefully.

Description:

LED lights, CFL lights and batteries are stored separately.

There is conscious policy of segregation.

Later, these solid waste items are either auctioned as scrap or sent to municipal waste management system as a part of Smart City project

Organic Waste Treatment



Organic Waste Treatment,

Description:

The organic waste is collected regularly and dumped in pits made only for this purpose. In total there are 8 nos such dumping pits of aggregate capacity of 2,500cu.m. One for non-biodegradable garbage one for building rubbish and remaining for bio-degradable waste. The dumped plant waste is allowed to decompose naturally. Pits which were filled up in 2013 and 2014 has decomposed fully and compost from these pits is being used internally for already planted trees and for new plants at nursery and elsewhere in the campus.

Use of Water Efficient Appliances (Water tap, toilet flush, etc)



Water less urinals.



Automatic periodic stopping taps.

Description:

Water less urinals.

Taps with limited discharge of water

About Biodiversity

Biodiversity or Biological diversity is a term that describes the variety of living beings on earth. Biodiversity is the variety of life. It can be studied on many levels. At the highest level, one can look at all the different species on the entire Earth. On a much smaller scale, one can study biodiversity within a calibrated ecosystem of an educational campus.

Biodiversity – the variety of all living things – forms the foundation of the processes that we rely on for life: clean air, clean water, soil formation, carbon and nutrient cycling and pollution remediation. Biodiversity gives us the landscapes we hold dear and ample opportunities for recreation - all contributing to our health and wellbeing.

Biodiversity also refers to the number, or abundance of different species living within region, such as ABV-IIITM campus. It represents the wealth of biological resources available on the campus. It can also be perceived as about the sustaining the natural area made up of community of plants, animals, and other living things that is being reduced at a steady rate as we plan human activities that is being reduced by habitat destruction.

Appropriate conservation and sustainable development strategies are integral to any approach to preserving biodiversity. Almost all cultures have their roots in our biological diversity in some way or form. Indian culture and value system is rich with references to trees/plants, animals, birds etc. acknowledging the vital role they play.

- Biodiversity allows us to live healthy and happy lives in natural surroundings.
- Greater species diversity ensures natural sustainability for all lifeforms.
- Biodiversity helps in leveraging certain benefits such as retaining healthy soils, water retention/water recycling, pollination, and pest control
- Simply for the wonder of it all. There are few things as beautiful (Like dance of a peacock, tweeting of Titahari, agility of snakes, freshness and lustre of green olive etc.) and inspiring as the diversity of life that exists on the campus.
- Biodiversity enhances recreational activities like bird watching, photography, It also helps to preserve and enhance cultural value and education and research.

We believe that exposing students about biodiversity will lead towards creative solutions for some of the most important issues we face today: climate change, biodiversity loss, natural resource management and sustainability.

The campus

ABV-IIITM is a home for rich flora and fauna. It supports more than 125 species of plants and animals/birds. The campus has ample green cover. The campus can be considered as an example for the co-existence of various types of mini-ecosystems. These are: Open grasslands, wetlands, thick vegetation patches, and patches of scrub jungle. The campus is spread over 150 acres and is broadly divided into two: Pocket A and Pocket B

The campus is divided into several blocks:

- a) Administrative block
- b) Academic block
- c) Hostel block
- d) MDP and IVH block
- e) Residential block
- f) Sports complex
- g) Utilities section

The main inhabitants are peacocks, snakes, mongoose, squirrels, various types of reptiles, a plethora of insects including 35+ species of butterflies and 58+ species of birds. Being in such a harmony, it is vital to sustain the same for many years.

This is done by:

- a) Extensive plantation programme. In every major event of the institute, dignitaries are requested to plant trees.
- b) Every year, as a part of Hariyalimaahotsav, plantation is done on a massive scale (1000+ are planted)
- c) Flower show is organised every year to showcase the varieties of flowers on the campus.
- d) School children are sensitized about butterfly conservatory on the campus.
- e) Special efforts are made to make water available to birds. Water bodies are also being developed on the campus.
- f) Awareness is created by displaying sign-boards at various places.
- g) Two special zones (Butterfly conservatory and Nursery) are developed which act as a habitat for variety of species on the campus.

It may be noted that, in spite of having vast campus area, we have occupied only about 7 % of ground area for construction of Infrastructure, leaving maximum possible ground area of greenery. The parking areas are also surrounded by large trees. A total of 81% area of campus is already covered by planted greenery.

The institute waste is being converted into compost. We have devised our own system of converting waste into compost without using any chemical or worms, but 100% natural. . Hundred percent of Institute's manure requirement is fulfilled by compost produced in the campus only.

Rich bio-diversity of the campus has attracted many students to opt for photography of nature like plants, birds, reptiles, natural scenery etc. It is evident from the fact that students are demanding photography sessions and we have been arranging the same since last two years. Some students have started participating in photography competitions also. Students now do not just look at the birds but they know their names and thus are more closely related to nature.

Bio-diversity at a glance

S.no.	Type	Nos spotted	Remarks
1	Plants(Trees)	129	Given in Appendix A
2	Flowers	66	Given in Appendix B
3	Birds	57	Given in Appendix C
4	Butterfly	34	Given in Appendix D
5	Reptiles	9	Given in Appendix E
6	Snakes	8	Given in Appendix F
7	Mammals	7	Given in Appendix G
	Total	310	

Biodiversity Park

A biodiversity park is established on the campus. The park is located opposite to Hostel Gangotri (Girls hostel) with the coordinates: Lat.26.2511N; Long.78.1762E. and Alt.212.20m. above MSL. It is a manifestation of sustainable living hosting variety of plants, shrubs, birds, and reptiles thriving in perfect harmony with each other. The park is developed consciously to act as a habitat where biodiversity is encouraged and nurtured. The park is developed with the following objectives in mind:

- i. Provide an ecosystem for various forms of species to thrive;
- ii. Act as a source of knowledge dissemination and sensitization about environment and adaptive management;
- iii. Enable to appreciate the inherent beauty of the nature via-vis of the campus

The park is having various areas earmarked as:

- a) Nursery
- b) Medicinal plants
- c) Aromatic plants
- d) Seasonal flowerbeds
- e) Neemvan
- f) Bervan
- g) Compostsite
- h) A hut to be used as interpretation centre
- i) Ample walkways

A small water body is developed and a bigger water body is under development. Salient

details of various areas are as under

S.N.	Name	Approx. Area	Predominant plants	Remarks
1	Nursery	2,000 sq.m.	Neem, double chandani, churel, karanja, Seasonal and medicinal plants.	East side entrance
2	Medicinal plants	150 sq.m	Tulsi, Shatavar, Aloe vera, giloi etc	
3	Aromatic plants	150 sq m	Mogra, Gulab etc.	
4	Seasonal flower bed	200 sqm	Dahlia, Cosmos, Gazania etc.	
5	Neem van	7,400 sq.m.	Neem (301), Kachnar(22) churel, shisham, gulmohar etc	All natural growth. Nursery to sports complex
6	Ber van	3,560 sq.m.	Ber(91) churel(12) etc	All natural growth. Adjacent to sports complex
7	Reserved area	35,600sq.m.	Ber, neem, Pakhar. Kachnar, etc.	All natural growth. From sports complex to cricket stadium
	Total	49,060sq.m.		

As a policy,

- Use of pesticides and herbicides is kept to a minimum;
- Green waste is recycled and reused on site as compost;
- Native tree, plants and shrub species are planted wherever possible.

Variety of Plants/Trees

	Botanical Name	Local Name
	A	A
1.	AEGLE- MARMELOS	BEL
2.	ACACIA-ARABICA	BABUL
3.	ACALYPHA INDICA	EKLIFA
4.	ALBIZZIA- LEBBEK	KALA- SIRIS
5.	AZADIRACHTA- INDICA	NEEM
6.	ALISTONIA-SCHOLARIS	SAPTPARNI
7.	ARAUCARIA-COLUMNARIS	X-MAS TREE
8.	ANONA-SQUAMOSA	SITAPHAL
9.	ARECA-PALM	ARECA PALM
10.	ARTOCARPUS- HETEROPHYLLUS	JACK FRUIT
11.	ASPARAGUS-RACEMOSUS	CHITABAR
12.	ADHATODA-VASICA	AADU
13.	ABRUS-PRECOTARIA	WHITE GOMCHI
14.	ACACIA-CATECHU	KHER
15.	ATROBOTRYS HEXAPETALUS	HARI-CHAMPA
16.	ATROCARPUS HETEROPHYLLUS	KATHAL
	B	B
17.	BAUHINIA-ALBA	WHITE KACHNAR
18.	BAUHINIA-VARIEGATA	PINK KACHNAR
19.	BOTTLE-PALM	BOTTLE-PALM
20.	BOMBAX-MALABARICUM	SEMAL
21.	BOUGAINVILLEA	BOUGAIN-BEL
22.	BEGONIA-BENESTAH	BEGONIA-BENESTA
23.	BUTEA-FRONDOSA	PALAS
	C	C
24.	CALLISTEMON	BOTTLE-BRUSH
25.	CARICA PAPAYA	PAPITA , PAPAYA
26.	CASSIA-FISTULA	AMALTAS
27.	CASSIA SIAMEA	KASOD
28.	CASSIA-GLAUCA	RED
29.	CASUARINA-EQUISETIFOLIA	JHAU
30.	COLVILLEA-RECEMOSA	RED GULMOHAR
31.	CARYOTAURENS	FISTAL-PALM
32.	CITRUS-LIMONIUM	LEMON
33.	CITRUS-SINENSIS	MOSAMBI
34.	CITRUS-SPECIMOSA	KAPOK
35.	CITRUS-SINENSIS	ORANGE
36.	CYCUS-CYCADACEAC	CYCUS
37.	CAPPARIS-APHYLLA	KARIL
38.	CARISSA-SPINARUM	KARONDA
39.	CASSIA-SIMEA	KASOD
40.	CESTRUMMO-CTURNUM	NIGHT- QUEEN
41.	CRINUM-LATIFOLIUM	SUDHARSAN
42.	CORIDA- MYXA	LASORA
	D	D
43.	DALBERGIA-LATIFOLIA	SHISHAM
44.	DELONIX REGIA	GULMOHAR RED
45.	DENDRAOCALAMUS-STRICTUS	BAANS
46.	DENDROCALAMUS-COLOSTACHYS	BAANS
47.	DARSINA	DARSINA
48.	DODONEA-VISCOSE	DODONEA
49.	DIOSPYROS-MELANOXYLON	TENDU
	E	E
50.	EUCALYPTUS-HYBRID	NEELGIRI
51.	EUGENIA-JAMBOLANA	JAMUN

52.	EUPHORBIAPULCHERRIMA	POINSETTIA
53.	ERYTHRINA-INDICA	TOTA
	F	F
54.	FERONIA LIMONIA	KAITH (KAPITTHA)
55.	FICUS-BENGALENSIS	BARGAD
56.	FICUS-GLOMERATA	GULAR
57.	FICUS-INFECTORIA	PAKHAR
58.	FICUS-RELIGIOSA	PIPAL
59.	FICUS-BENJAMINA	BENJAMINA
60.	FICUS-ELASTICA	RUBBER PLANT
61.	FICUS-CARICA	ANJEER
	G	G
62.	GREVILEA-ROBISTA	SILVER-OAK
63.	GRENISA-ASIATICA	PHALSA
64.	GOSSYPIUM-ARBOREUM	COTTON
65.	GMELINA-ARBOREA	KHAMER
	H	H
66.	HIBISCUS	GUDHAL
67.	HOLOPTELEA-INTEGRIFOLIA	CHIROL
68.	HAMELIA-PATENS	HAMELIA
	I	I
69.	IXORA	WEST INDIAN-JASMINE
	J	J
70.	JACARANDA-MINOSAEFOLIA	BLUE-GULMOHAR
71.	JACARANDA CAROBA	CAROB
72.	JAVA COTTON	JAVA COTTON
73.	JUNEPERUS	DHUP CHANDAN
74.	JATROPHA	JATROPHA
75.	JASMINUMSANAM-BAC	MOGRA
	L	L
76.	LANTANA CAMARA	LANTANA(KAN-KUNDAL)
77.	LEUCAENA-LEUCOCEPHALA	CUBA PLANT
78.	LOLEAEUROPIE(OLEACEAE)	JATUN
79.	LAGERSTROMEA	GULFANUS
	M	M
80.	MIMUSEPS-ELENGI	MORSALI
81.	MELLEDIA-OVALIFOLIA	JAMANIBAHAR
82.	MANGIFERA-INDICA	MANGO
83.	MICHALIA CHAMPACA	CHAMPA
84.	MURRAYA-KOENIGII	SWEET-NEEM
85.	MORINGA-OLEFERA	DRUM-STICK
86.	MORUS	SHAHTUT
87.	MURRAYA-EXOTICA	MADHUKAMINI
88.	MURRAYA PANICULATA	MOGRA/JASMIN
89.	MUSASPP	BANANA
	N	N
90.	NUCLEA-KADAMBA	KADAM
91.	NYCTANTHES-ARBORISTRIS	HARSHINHAR
	O	O
92.	OCIMUM TENUIFLORUM	TULSI
93.	OLIVE	OLEAEUROPAEA
94.	OLEANDER	YELLOW KANER
	P	P

95.	PHOENIX-DACTYLIFERA	KHAJUR
96.	PONGAMIA PINATA	KARANJ
97.	PROSOPIS-CINERARIA	CHHENKUR
98.	PITHECELLOBIUM	JUGLE JALEBI
99.	PHYLLANTUS-EMBLICA	AMLA
100.	PELTOPHORUM	GULMOHARYELLOW
101.	PSEDIUM-GUAVA	AMROOD
102.	PITHECELLOBIUM-DULCE	JUNGLE-JALEBI
103.	POLYTHEA-LONGIFOLIA	ASHOK
104.	POLYTHEA-VARPENDULA	ASHOK PENDULA
105.	POLYTHEA-UMBRELLA	SITA-ASHOK
106.	PONGAMIA	KARANJ
107.	PROSOPIS-JULIFLORA	KHEJRA
108.	PUNICA-GRANATUM	POMAGSANATUM(ANAR)
109.	PLUMERIA-ALBA	CHAMPA
110.	PETEROSPERMUM	ACERIBOLIUM (KANAK-CHAMPA)
111.	PUTRANGIVA-ROXBURGHIIA	GIYA PUTRA/PUTRANIVA
	R	R
113	RICINUSCOMMUNIS	ARANDEE
	S	S
114	SARACA ASOKA	SITA ASHOK
115	SCHILEICHERA-TRIJUNGA	KUSUM
116	SIMAROUBA-GLAUCA	LAXMITARU
117	SAPODILLA-MANILKARA-ZEPATA	CHIKU
118	SYZYGIUM CUMINI	JAMUN
	T	T
119	TECOMA-STANS	TECOMA
120	TECTONA-GRANDIS	SAAGAUN
121	TAMARINDUS-INDICA	IMLI
122	TERMINALIA-ARJUNA	ARJUN
123	TERMINALIA-BELERICA	BAHEDA
124	THASPESIA-POPULENA	PAPLAR
125	TABERNAEMONPANA-DIVARICATA	CHANDNI
126	THUJA	VIDYA
127	TINOSPORA CORDIFOLIA	GILOY
	W	W
128	WITHANIA SOMNIFERA	ASHWA GANDHA
	Z	Z
129	ZIZYPHUS-JUJUBA	BER

Reference:

http://www.biodiversityofindia.org/index.php?title=Family-wise_list_of_plants

Appendix B:

Variety of Flowers on the campus

SN	Common Name of Flower	Also called as
1	Aster ,Michaelmas Daisy	Aster amellus
2	BanphulPansy ,Sreevat	Viola tricolour var. hortensis
3	Begonia Venista ,	Golden Shower
4	Bottle Brush ,Cheel	Callistemon citrinus
5	BougainVillea, Paper Flower	Prima vera, santarita
6	Brass Dabar Potika, Shalina,	Tapaspriya
7	Calendula,	Field marigold
8	Candytuft, Snow Flake	Iberis
9	Canna	Kardal, Indian shot
10	Cape Daisy	Venidium ,
11	Chameli, Jai, Madanban	Crape jasmine, Jasminum
12	Champa,	Frangipani, plumeria
13	Chandani , pin wheel	Tabermemontanadivericata
14	Cineraria	Jacobeamaritima, Silver dust
15	Corn flower, bachelor's button	Centaurea cyanus
16	Cosmos	Brahmaand
17	Dahlia	Dahlia pinnata
18	Dhatoora	Datura, stramonium
19	Dog flower, Snapdragon	Antirrhinum,
20	Double Chandni	pinwheelflowercrape jasmine
21	Double dahlia	Dahlia
22	Erithrinia	Kanwo beach
23	Four'o clock	Mirabilis jalapa
24	Galatia	Galatia
25	Gazania	Treasure flower
26	Gudhal	Hibiscus rosasinensis
27	Gulab	Rose, Rosa
28	Gulbahar, Daisy	Bellis perennis
29	Guldaudi	Chrysanthemum
30	Gulkhaira, Hollyhock	Alcea
31	Gulmohar	Delonix regia
32	Gulphanus	Gulphanus
33	Hari Champa, Manorangini	Atrabotryshexapetalus

SN	Common Name of Flower	Also called as
34	Harsingar, Night Jasmine, Parijat	Nyctanthes arbor-tristis
35	Ice plant	Izoaceae
36	Jungle flame, Ixora,	Ixora coccini
37	Kacchiguldavdee, Chandra Mallika, Sevanti	Chrysanthemum
38	Kamal, kumud, Lotus	Nelumbo nucifera
39	Kamarkas	Salvia , Sage Weed,
40	Kandpushp	Tulip
41	Kaner	Indian Oleander
42	Khas khas,Poppy	Papaver somniferum
43	Lal sarso	Red Leaf Musturd
44	Lantana, Rai munia	Lantana camara
45	Larkspur,	Dolphinium
46	Lily	Kumudini
47	Madhukamini , Kamini	Murrayapaniculata
48	Mari Gold –Hybrid, Genda	Tagetes
49	Mari gold mini	Genda
50	Mogra, Motia	Jasminum sambac
51	Nargis, Daffodil	Narcissus
52	Nasturtium	Trapaeolum
53	Nine'o clock	Portulaca grandiflora
54	Paper flower	Paper flower
55	Petunia, Screw Pine ,	Sandhya Malti
56	Phlox	Blue Emerald
57	Powder puff	Calliandrahaematocephala
58	Raat Rani,	Night Blooming Jasmine
59	Rajnigandha	Polianthestuberosa
60	Sadabahr ,	Periwinkle, Vinca
61	Star glory, cypress vine	Ipomoea quamoclit
62	Suraj mukhi , Sun flower	Helianthus annuus
63	Sweet Sultan	Amberboamoschata
64	Sweet willium	Dianthus barbatus
65	Tecoma Stans,	Yellow Bells
66	Verbena	Verbena officinalis

Appendix C:

Variety of Birds

SN	Common Name	Also called as
1	Ababil	House swift
2	AndhaBagula	Indian Pond Heron
3	Anjan/nari	Grey heron
4	Asian pied starling	Pied Maina
5	Baaj	Black wing Kite, Shikra
6	Bagla	Tricolour Heron
7	Bater	Common Quell
8	Bhujanga/Kotwal	Black Drongo
9	Blue tailed bee eater	Blue tailed bee eater
10	Chatak	Jacobin Cuckoo
11	Chhotisilaahi	Lesser whistling duck
12	ChitrakFaakhtaa	Spotted Dove
13	ChotiFakhta	Little Brown Dove
14	Common lora	Common lora
15	Crow	Crow
16	Darjee	Common Tailor bird
17	Dauma	Indian Chat
18	Dayal/ Dahiya	Oriental Magpie robin
19	Desi Crow	House crow
20	Dhanchidi/Dhanesh/ Chalotra	Indian Grey Hornbill
21	Dom Kak	Common Raven
22	Eurasian thicknee	Eurasian thicknee
23	Ganga myna	Bank myna
24	Gay(cow)Bagla	Cattle Egret
25	Gayanga	Jungle babbler
26	Hariyal	Yellow footed green pigeon
27	Hoodhood	Common Hoopoe
28	Kabutar	Blue Rock Pigeon
29	Kala sir bulbul	Red vented bulbul

SN	Common Name of Flower	Also called as
30	Kala sir Mouna	Brahminy Myna
31	Kali chidiya	Indian Robin
32	Kalsiree bulbul	Red vented bulbul
33	KarchiyaBagula	Little egret
34	Khanjan	White browed wagtail
35	Kilkila	White throated King Fisher
36	Koel	Asian Koel
37	Kokila	Koyal
38	Kotwal	Drongo
39	Lal LolkiTitihari	Red/yellow Wattled Lapwing
40	Mahalat	Asian Tree Pie
41	Mahok/ Bhardwaj	Greater Coucal
42	Myna	Common Myna
43	Neelkantha	Indian Roller
44	Pahadimouna	Common hill myna
45	Pan dubbi/ Jal murgi	Water hen
46	Papiha	Common hawk cuckoo
47	Parrot	Rose Ringed Parakeet
48	Peacock	Indian Peafowl
49	Pigeon white	Pigeon White
50	Pigeon Grey	Pigeon Grey
51	Shakarkhora/ Phal chuhi	Purple Sun bird
52	Sparrow (Goraiya)	House sparrow
53	SunhariPilak (Peore)	Indian Golden Oriole
54	Teetar	Gray Francolin
55	TuiaTota	Plum headed parakeet
56	Tuktukiya, Basanta	Copper Smith Barbet
57	Ullu	Barn Owl

Appendix D: Variety of Butterflies

I. Swallowtails(*Papilionidae*)

1. CommonMormon*Papiliopolytes*
2. CommonRose*Atrophaneuraaristolochiae*
3. CrimsonRose**Atrophaneurahector*
4. LimeButterfly*Papiliodemoleus*

II. Whites&Yellows(*Pieridae*)

5. CommonEmigrant*Catopsiliapomona*
6. CommonGrassYellow*Euremahecabe*
7. CommonGull*Ceporanerissa*
8. MottledEmigrant**Catopsiliapyranthe*
9. One-spotGrassYellow*Euremaandersoni*
10. YellowOrangeTip**Ixiaspyrene*
11. Psyche*Leptosianina*
12. SpotlessGrassYellow*Euremalaeta*

III. Blues(*Lycaenidae*)

13. DarkGrassBlue*Zizeeriakarsandra*
14. GramBlue*Euchrysopscnejus*
15. rassJewel*Freyeriatrochylus*
16. LimeBlue*Chiladeslajus*
17. PeaBlue**Lampidesboeticus*
18. RoundedPierrot*Tarucusnara*
19. ZebraBlue*Leptotesplinius*

IV. Brushfooted(*Nymphalidae*)

20. BluePansy*Junoniaorithiya*
21. CommonBushbrown*Mycalesisperseus*
22. CommonCastor*Ariadnemerione*
23. CommonIndianCrow*Euploeacore*
24. CommonLeopard*Phalantaphalantha*
25. CommonThreering*Ypthimaasterope*
26. DanaidEggfly*Hypolimnasmisippus*
27. GreatEggfly*Hypolimnasbolina*
28. PlainTiger*Danauschrysippus*
29. TawnyCoster*Acraeaviolae*
30. YellowPansy*Junoniahierta*

V. Skippers(*Hesperiidae*)

31. CommonBandedAwl*Hasorachromus*
32. IndianPalmBob*Suastusgremius*
33. SmallBrandedSwift*Pelopidasmathias*
34. StraightSwift*Parnaraguttatus*

Total Butterflies observed

S.No.	Name of the family	No.of Species
I	Swallowtails	4
II	Whites&Yellows	8
III	Blues	7
IV	Brushfooted	11
V	Skippers	4
	Total	34

The above statistics is based on the report of : Prof Aseem Shrivastava , Wildlife Institute of India, Dehradun

Appendix E: Variety of Reptiles

Sn	Common Name
1.	Snake
2.	Gurehla
3.	Garden Lizard(Calotes versicolor)
4.	Indian Fan-throated Lizard(Sitanaponticeriana)
5.	Common Monitor Lizard`
6.	Termite Hill Gecko
7.	Yellow Green House Gecko
8.	Slender Gecko
9.	Spotted Gecko

Appendix F: Variety of Snakes

Sn	Common name
1.	Cobra
2.	King Cobra
3.	Russelss Viper
4.	Saw Scaled Viper
5.	Purple Pit Viper
6.	Common Rat Snake
7.	Flying snake
8.	Vine snake

<http://www.indianwildlifemoments.com/indian-wildlife-snakes-south-asia-fauna.htm>

Appendix G: Variety of Mammals

Sn	Common name
1	Rabbit
2	Mongoose (Herpestesedwardsii)
3	Dog
4	Cat
5	Rat (Bandicotaindica)
6	Squirrel (Funambuluspalmarum)
7	Bat (Cynopterus sphinx)

Birds @ Campus



Kingfisher



Indian Chat



Dayal



White browed



Egret



Shikra



Urasian



Goraiya



Tricolour Heron



NATIONAL---BIRD



Brahmani Maina



Coppersmith



Roseringed

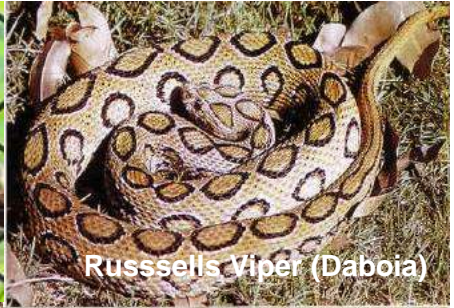
Reptiles/Snakes/Mammals@Campus



Scorpion



Mongoose



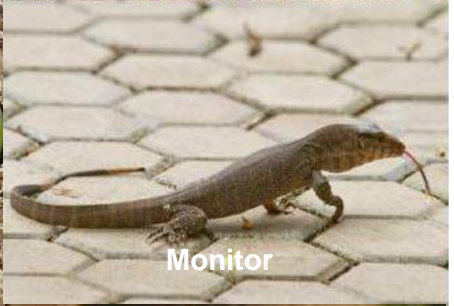
Russells Viper (Daboia)



RatSnak(GhodaPachhad)



VineSnak(WaterSnak)



Monitor



Common Krait (Kaili)



SpectacleCobra(Nagraj)



Bengal Monitor Lizard (Gureh)



Centipede(KanKhajura)



Meerkat(Markat)



Land Snail(Ghong)



Rabbit(Khargosh)



Owl(Ulloo)



Leopard AsianCivet(KabarBijju)

Beautiful quotes about flowers

“If we could see the miracle of a single flower clearly, our whole life would change”.
Buddha

“Theearthlaughsinflowers.”
[Ralph WaldoEmerson](#)

“Flowers always make people better, happier, and more helpful; they are sunshine, food and medicine for the soul”.
Luther Burbank

“Flowers... are a proud assertion that a ray of beauty out-values all the utilities of the world”.
Ralph Waldo Emerson

“The lovely flowers embarrass me; they make me regret I am not a bee”
Emily Dickinson

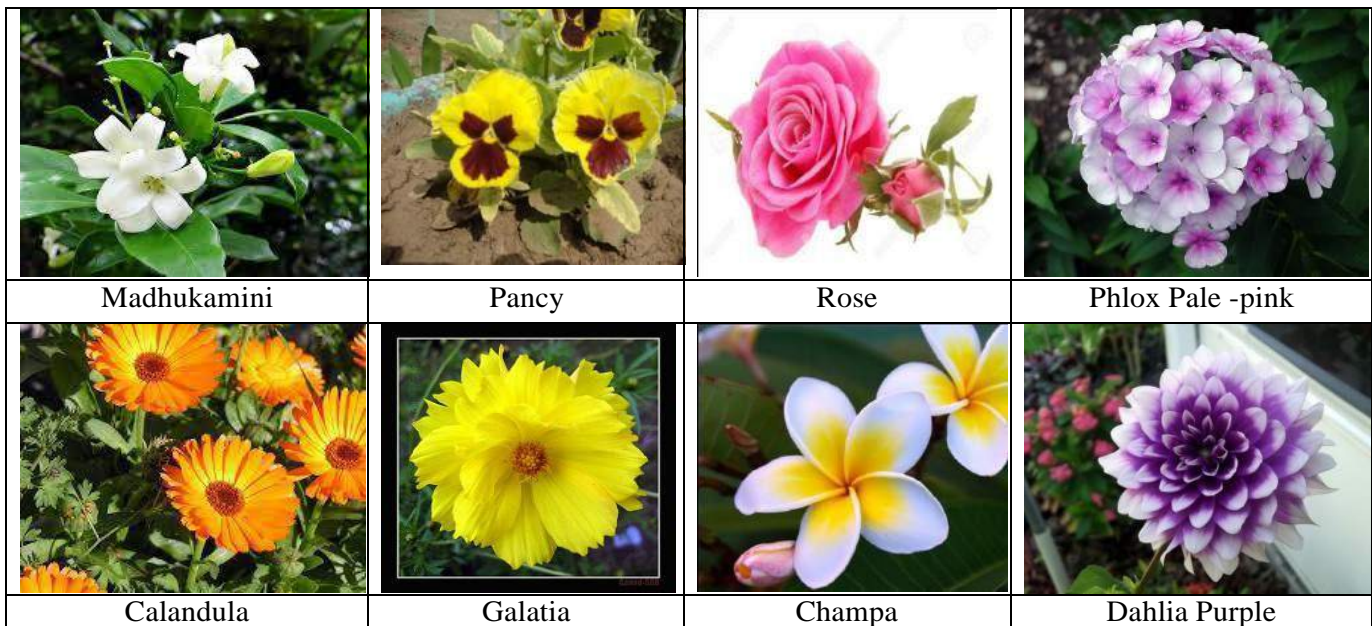
“Every flower is a soul blossoming in nature.”
Gerard de Nerval

“I hope someday to meet God, because I want to thank HIM for the flowers.”
Robert Brault

“Flowers don’t worry about how they’re going to bloom. They just open and turn toward the light and that makes them beautiful.”
Jim Carrey

Source:

https://www.brainyquote.com/quotes/quotes/r/ralphwaldo104259.html?src=t_flowers
https://www.brainyquote.com/quotes/quotes/l/lutherbur277482.html?src=t_flowers





विश्वजीवनामूनं ज्ञानम्

LOCATION MAP OF BIO-DIVERSITY PARK

