UNIT I

INTRODUCTION TO INTERNET AND ENVIRONMENT

Internet As A Knowledge Repository

Knowledge is increasingly recognized by most large business organizations to be a primary resource in sustaining competitive advantage. Knowledge sharing has been identified as a key challenge in knowledge management. Many organizations are using the Internet not only as a pool of enormous information but also for supporting information and knowledge sharing.

In the information age, lifelong learning and collaboration are essential aspects of most innovative work. Information technology is not only transforming our workplace but also our educational system. The information revolution is having a profound and permanent effect on the way we learn. Fortunately, the computer technology which drives the information explosion also has the potential to help individuals and teams to learn much of what they need to know on demand. In particular, computer-based systems on the Internet can be designed to capture knowledge as it is

generated within a community of practice and to deliver relevant knowledge when it is useful.

In this internet world, we can search any kind of information. Just type the keyword in search engine and you can find a lot of information about it. The internet is recognized as a rich source of information, which can be easily tapped by any person who has the skills to use the internet. More than ever before online databases are easily accessible to all learners who have a computer and a telephone line.

The rapid development of Information and Communication Technology has yielded an almost unlimited variety of databases and multimedia platforms that are able to supply various needs, including knowledge, edutainment, entertainment, leisure activities, consumer facilities, interpersonal interaction etc. there are many knowledge centers in the net like which can be accessed and used by all. There are virtual library and also on-line discussion boards which are useful tools for academic exchanges. Thus the use of internet by students and teachers is perceived as a vehicle to increase knowledge and skills necessary for successful negotiation of tasks presented by 21st century.

Knowledge repository means a place to store knowledge and retrieve knowledge. Hence internet is truly a knowledge repository.

Academic Search Techniques

As the largest interconnection of computers and computer networks, the World Wide Web makes information widely accessible, but information integrity and management remain

key issues for individuals and firms using this platform. The Internet can provide a wealth of information, but the credibility and accuracy depend entirely on the source, and finding credible information can be time-consuming, requiring hours of sorting through largely irrelevant sites. These difficulties often arise because search engines –"while widely used – are often not wisely used". For many people, arriving at the information desired, rather than at thousands of irrelevant hyperlinks, remains more an art form than a science. The computers are just a tool which helps you to get the information from the net. It cannot think for you. It cannot impart knowledge to you. In this situation, Search Engines are like the index in the back of a book. It helps you to search for specific words and topics. Some of the examples of search engines are: Google, Yahoo, Alta Vista, Excite, Hotbot, Infoseek, etc.

GOOGLE

- Google is a full-text search engine, which uses computerized "spiders" to index millions, sometimes billions, of pages, allowing for much narrower searches than searchable subject index, which searches only the titles and descriptions of sites, and doesn't search individual pages
- Google is case-insensitive. If you search for Three, tHRee, THREE, or even THREE, you get the same results.
- Singular is different from plural. Searches for apple and apples turn up different pages
- The order of words matters. Google considers the first word most important, the second word next, and so on.

- Google ignores most little words, including include "I," "where," "how," "the," "of," "an," "for," "from," "how," 'it," "in," and "is,". Google ignores most punctuation, except apostrophes, hyphens, and quote marks.
- Google returns pages that match your search terms exactly.
- Google search word limit is 32.

Some of the academic search techniques in the context of Google search engine are as follows.

1. Phrase Searches

- ➢ Enter key words search techniques. Google will find matches where the keywords appear anywhere on the page.
- ➢ If you want Google to find you matches where the keywords appear together as a phrase, surround them with quotes, like this "search techniques".

2. Basic Boolean

- ➢ Google's Boolean default is AND, which means that if you enter query words without modifiers, Google will search for all your query words.
- ➢ If you prefer to specify that any one word or phrase is acceptable, put an OR (in capital letter), lower case or won't work correctly. For example: enter Yahoo OR Google.
- ➢ A computer programming character | can work like OR (e.g. Yahoo | Google)

- If you want to search for a particular term along with two or more other terms, group the other terms within parentheses, like so "search techniques" (Yahoo OR Google).

3. Negation

- If you want to specify that a query item must not appear in your results, prep end a (minus sign or dash): "search techniques" –Google. This will search the pages that contain "search techniques", but not the word Google
- Note that the symbol must appear directly before the word or phrase that you don't want. If there's space between, as in the following query, it won't work as expected "search techniques" – Google

4. Explicit Inclusion

- Google will search for all the keywords and phrases that you specify, however, there are certain words that Google will ignore because they are considered too common to be of any use in the search (e.g. "a", "the", "of", etc.)
- You can force Google to take a stop word into account by prep ending a + (plus) character, as in +the "search techniques".

5. Synonyms

- The Google synonym operator, the ~ (tilde) character, prep ended to any number of keywords in your query,

asks Google to include not only exact matches, but also what it thinks are synonyms for each of the keywords. Searching for: ape turns up results for monkey, gorilla, chimpanzee, and others (both singular and plural forms) of the ape or related family, as if you'd searched for: monkey gorilla chimpanzee (Synonyms are bolded along with exact keyword matches on the results page, so they're easy to spot)

6. Number Range

- The number range operator, .. (two periods), looks for results that fall inside your specified numeric range (e.g. digital camera 3..5 megapixel $800..$1000)
- You can also use the number range syntax with just one number, making it the minimum or maximum of your query (e.g. digital camera ..5 megapixel $800..)

7. Simple Searching and Feeling Lucky

- The I'm Feeling Lucky™ button is a thing of beauty. Rather than giving you a list of search results from which to choose, you're whisked away to what Google believes is the most relevant page given your search (i.e., the first result in the list). Entering Washington Post and clicking the I'm Feeling Lucky button takes you directly to http://www.washingtonpost.com.

Searching Within Your Results help you narrow down your results to find the really relevant pages within your results pages.

Cyber Presence

Cyber presence is the way an individual and/or organization presents itself within the cyber domain i.e., Internet. It's important to recognize and actively participate in the cyber domain. Failure to properly present yourself and/or organization could damage your reputation and assist in the failure of your organization.

Successful cyber presence involves many activities:

- Website
- Social Media
- SEO(Search Engine Optimization)
- SEM(Search Engine Marketing)
- and more...

For cyber presence one must have the ability to:

- Communicate
- Share data, information, knowledge
- Interact with other entities and capabilities
- Market itself

There are many agencies works with you to properly establish your cyber presence. Creating a website is a powerful communication tool to begin your cyber presence.

A website is a unique way to communicate with the world! Whether you choose to create a website to share your passion, get people to know your business, sell products or any other reason, there are no boundaries to what you can do! With a website, a ton of possibilities are open to you!

The internet is the ideal media to get in touch with a broad audience at a limited cost.

A website will give you:

- The perfect business card for your enterprise
- A detailed and permanent ad
- A place that's open 24/7 all year round
- Increased competitiveness
- Better responsiveness
- Increased credibility

Academic websites

Educational websites can include websites that have games, videos or topic related resources that act as tools to enhance learning and supplement classroom teaching. These websites help make the process of learning entertaining and attractive to the student, especially in today's age.

While there are many advantages of such websites, we also need to be aware of the negatives. Students need to be guided properly. Without proper guidance, students may find resources and content that are not reliable or do not align with the direction of the teaching in class. Some websites are huge and offer a massive variety of games and resources. Students may be easily distracted on such websites and end up spending time on activities that are either below their level or do not complement or add to the classroom teaching. Unrestricted access and freedom on the internet can be dangerous, especially for younger students.

Following are some websites used for academic purposes:

1. EdX: edx.org

This website can be most preferred by the students as it was founded by Harvard University and MIT in 2012. EdX is an online learning destination and MOOC provider, offering high-quality courses from the world's best universities and institutions to learners everywhere. Out of the 90 universities, it includes top global rankers.

2. Academic Earth: academicearth.org

The website gives huge array of academic options to student from traditional to contemporary studies. They provide online degree courses from accounting and economics to engineering and also carries material on niche subjects like behavioural psychology. Moreover, it has have a collaboration with a bunch of reputed colleges such as University of Oxford, Massachusetts Institute of Technology, Stanford University and many other. Keeping in mind the interest level of the students, the portal has videos and podcasts in all the subjects.

3. Internet Archive: archive.org

From anything to everything, internet archive is an authentic website storing the originals from various big websites. For example, American libraries include the collection of free book directly attached with the college libraries' websites. This is one of the best websites imparting free and accessible knowledge. However, it does not give admission or certificates for learning.

4. Big Think: bigthink.com

Big Think has over 2,000 fellows who have received great fame in their forte. These experts write articles and record tutorials for the students, later the content is further refined by the editorial team of the website, giving authentic material to the students. Students can make great use of this website by creating their own distinct ideology, as it provide various opinions on one subject. Moreover, students can get views from experts as well.

5. Coursera: courser.org

The moment a student opens this website, he is bound to get sucked into the number of courses available in his topic of interest. It is a user-friendly website. Students can find big universities and a sharable electronic Course Certificate. "Courses include recorded video lectures, auto-graded and peer-reviewed assignments, and community discussion forums. When you complete a course, you'll receive a sharable electronic Course Certificate," assures the website.

6. Brightstorm: brightstorm.com

High school scholars can use this site for reference, rather an interactive reference website, which will mitigate their learning problems. Of course, it is not easy for a student to comprehend the intricate technical terminologies, so the website is making the textbooks easier for students. They provide help in all subjects from mathematics to science, history and other subjects. Entrance exams are generally quite gruelling for students, and this website can solve the problem. They have arranged the topics symmetrically, clearing the air and structure of the competitive exams.

7. CosmoLearning: cosmolearning.com

Unlike other websites, this portal provides academic as well as skill-based learning to the students. Students can either refer to the material being provided or enrol themselves in any of the 58 courses. The website is synthesised with three main options, including educational material, courses and documentaries. The subjects have been divided into two sections, namely extra-curricular and academic subjects.

8. Futures Channel: thefutureschannel.com

This is not just an online portal, but an educational channel for the learners. Unlike other websites, it only represent the significant data catering the problems faced by students. For example, students generally face problem in algebra, so they have created special section for the same.

9. Howcast: howcast.com

It's a one-stop website for all the subjects, none of the above portals have these many arenas. Keeping the essence of inquisitiveness alive, the portal functions on the common key words including the word 'how'.

10. Khan Academy: khanacademy.org

Khan Academy is an online coaching website. Students who cannot afford a coaching can refer to this website. It gives a win-win situation to the students by giving them the liberty to learn on their pace, as it has a personalised dashboard to gauge the progress report. It has all the traditional school subjects including math, science, computer programming, history, art history, economics, and more. Moreover, it has lessons from kindergarten to calculus, all at one stop. To

enhance the content for the students, it has partnered with NASA, the Museum of Modern Art, the California Academy of Sciences, and MIT. Also, the content is available in 36 languages.

Multidisciplinary nature of environmental studies

Definition

Environmental studies deals with every issue that affects an organism. It is essentially a multidisciplinary approach that brings about an appreciation of our natural world and human impacts on its integrity. It is an applied science as its seeks practical answers to making human civilization sustainable on the earth's finite resources. Its components include biology, geology, chemistry, physics, engineering, sociology, health, anthropology, economics, statistics, computers and philosophy.

Scope

As we look around at the area in which we live, we see that our surroundings were originally a natural landscape such as a forest, a river, a mountain, a desert, or a combination of these elements. Most of us live in landscapes that have been heavily modified by human beings, in villages, towns or cities. But even those of us who live in cities get our food supply from surrounding villages and these in turn are dependent on natural landscapes such as forests, grasslands, rivers, seashores, for resources such as water for agriculture, fuel wood, fodder, and fish. Thus our daily lives are linked with our surroundings and inevitably affects them. We use water to drink and for other day-to-day activities. We breathe

air, we use resources from which food is made and we depend on the community of living plants and animals which form a web of life, of which we are also a part. Everything around us forms our environment and our lives depend on keeping its vital systems as intact as possible.

Our dependence on nature is so great that we cannot continue to live without protecting the earth's environmental resources. Thus most traditions refer to our environment as 'Mother Nature' and most traditional societies have learned that respecting nature is vital for their livelihoods. This has led to many cultural practices that helped traditional societies protect and preserve their natural resources. Respect for nature and all living creatures is not new to India. All our traditions are based on these values.

Emperor Ashoka's edict proclaimed that all forms of life are important for our well being in Fourth Century BC.

Over the past 200 years however, modern societies began to believe that easy answers to the question of producing more resources could be provided by means of technological innovations. For example, though growing more food by using fertilizers and pesticides, developing better strains of domestic animals and crops, irrigating farmland through mega dams and developing industry, led to rapid economic growth, the ill effects of this type of development, led to environmental degradation.

The industrial development and intensive agriculture that provides the goods for our increasingly consumer oriented society uses up large amounts of **natural resources** such as

water, minerals, petroleum products, wood, etc. **Nonrenewable resources,** such as minerals and oil are those which will be exhausted in the future if we continue to extract these without a thought for subsequent generations. **Renewable resources,** such as timber and water, are those which can be used but can be regenerated by natural processes such as regrowth or rainfall. But these too will be depleted if we continue to use them faster than nature can replace them. For example, if the removal of timber and firewood from a forest is faster than the regrowth and regeneration of trees, it cannot replenish the supply. And loss of forest cover not only depletes the forest of its resources, such as timber and other non-wood products, but affect our water resources because an intact natural forest acts like a sponge which holds water and releases it slowly. Deforestation leads to floods in the monsoon and dry rivers once the rains are over.

Such multiple effects on the environment resulting from routine human activities must be appreciated by each one of us, if it is to provide us with the resources we need in the long-term. Our natural resources can be compared with money in a bank. If we use it rapidly, the capital will be reduced to zero. On the other hand, if we use only the interest, it can sustain us over the longer term. This is called **sustainable utilization or development**.

Importance

Environment is not a single subject. It is an integration of several subjects that include both Science and Social Studies. To understand all the different aspects of our environment we need to understand biology, chemistry,

physics, geography, resource management, economics and population issues. Thus the scope of environmental studies is extremely wide and covers some aspects of nearly every major discipline.

We live in a world in which natural resources are limited. Water, air, soil, minerals, oil, the products we get from forests, grasslands, oceans and from agriculture and livestock, are all a part of our life support systems. Without them, life itself would be impossible. As we keep increasing in numbers and the quantity of resources each of us uses also increases, the earth's resource base must inevitably shrink. The earth cannot be expected to sustain this expanding level of utilization of resources. Added to this is misuse of resources. We waste or pollute large amounts of nature's clean water; we create more and more material like plastic that we discard after a single use; and we waste large amount of food, which is discarded as garbage. Manufacturing processes create solid waste byproducts that are discarded, as well as chemicals that flow out as liquid waste and pollute water, and gases that pollute the air. Increasing amounts of waste cannot be managed by natural processes. These accumulate in our environment, leading to a variety of diseases and other adverse environmental impacts now seriously affecting all our lives. Air pollution leads to respiratory diseases, water pollution to gastro-intestinal diseases, and many pollutants are known to cause cancer.

Improving this situation will only happen if each of us begins to take actions in our daily lives that will help preserve our environmental resources. We cannot expect Governments

alone to manage the safeguarding of the environment, nor can we expect other people to prevent environmental damage. We need to do it ourselves. It is a responsibility that each of us must take on as ones own.

Need for public awareness

As the earth's natural resources are reducing and our environment is being increasingly degraded by human activities, it is evident that something needs to be done. We often feel that managing all this is something that the Government should do. But if we go on endangering our environment, there is no way in which the Government can perform all these clean-up functions. It is the prevention of environment degradation in which we must all take part that must become a part of all our lives. Just as for any disease, prevention is better than cure. To prevent ill-effects on our environment by our actions, is economically more viable than cleaning up the environment once it is damaged. Individually we can play a major role in environment management. We can reduce wasting natural resources and we can act as watchdogs that inform the Government about sources that lead to pollution and degradation of our environment.

This can only be made possible through mass public awareness. Mass media such as newspapers, radio, television, social media, strongly influence public opinion. However, someone has to bring this about. If each of us feels strongly about the environment, the press and media will add to our efforts. Politicians in a democracy always respond positively to a strong publicly supported movement. Thus if you join an NGO that supports conservation, politicians will make green policies. We are living on spaceship earth with a limited supply

of resources. Each of us is responsible for spreading this message to as many people as possible.

Suggested further activities for concerned students:

- Join a group to study nature, such as WWFI or BNHS, or another environmental group.
- Begin reading newspaper articles and periodicals such as 'Down to Earth', WWF-I newsletter, BNHS Hornbill, Sanctuary magazine, etc. that will tell you more about our environment. There are also several environmental websites.
- Lobby for conserving resources by taking up the cause of environmental issues during discussions with friends and relatives. Practice and promote issues such as saving paper, saving water, reducing use of plastics, practicing the 3Rs principle of reduce, reuse, recycle, and proper waste disposal.
- Join local movements that support activities such as saving trees in your area, go on nature treks, recycle waste, buy environmentally friendly products.
- Practice and promote good civic sense such as no spitting or tobacco chewing, no throwing garbage on the road, no smoking in public places, no urinating or defecating in public places.
- Take part in events organized on World Environment Day, Wildlife Week, etc.
- Visit a National Park or Sanctuary, or spend time in whatever nature you have near your home.
- Create a social media group about this issue, and give maximum exposure to the public.

Institutions in environment

There have been several Government and Nongovernment organizations that have led to environmental protection in our country. They have led to a growing interest in environmental protection and conservation of nature and natural resources. The traditional conservation practices that were part of ancient India's culture have however gradually disappeared. Public awareness is thus a critical need to further environmental protection. Among the large number of institutions that deal with environmental protection and conservation, a few well-known organizations include government organizations such as the BSI and ZSI, and NGOs such as BNHS, WWF-I, etc.

- **Bombay Natural History Society (BNHS), Mumbai**

BNHS began as a small society of six members in 1883. It grew from a group of shikaris and people from all walks of life into a major research organization that substantially influenced conservation policy in the country. The influence on wildlife policy building, research, popular publications and peoples action have been unique features of the multifaceted society. Undoubtedly its major contribution has been in the field of wildlife research. It is India's oldest conservation research based NGO and one that has acted at the forefront of the battle for species and ecosystems. The BNHS publishes a popular magazine called Hornbill and also an internationally well-known Journal on Natural History. Its other publications include the Salim Ali Handbook on birds, JC Daniel's book of Indian Reptiles, SH Prater's book of Indian Mammals and PV Bole's book of Indian Trees. One of its greatest scientists was

Dr. Salim Ali whose ornithological work on the birds of the Indian subcontinent is world famous. The BNHS has over the years helped Government to frame wildlife related laws and has taken up battles such as the 'Save the Silent Valley' campaign.

- **World Wide Fund for Nature (WWF-I), New Delhi**

The WWF-I was initiated in 1969 in Mumbai after which the headquarters were shifted to Delhi with several branch offices all over India. The early years focused attention on wildlife education and awareness. It runs several programs including the Nature Clubs of India program for school children and works as a think tank and lobby force for environment and development issues.

- **Center for Science and Environment (CSE), New Delhi**

Activities of this Center include organizing campaigns, holding workshops and conferences, and producing environment related publications. It published a major document on the 'State of India's Environment', the first of its kind to be produced as a Citizen's Report on the Environment. The CSE also publishes a popular magazine, 'Down to Earth', which is a Science and Environment fortnightly. It is involved in the publication of material in the form of books, posters, video films and also conducts workshops and seminars on biodiversity related issues.

- **CPR Environmental Education Centre, Madras**

The CPR EEC was set up in 1988. It conducts a variety of programs to spread environmental awareness and creates an interest in conservation among the general public. It focused

attention on NGOs, teachers, women, youth and children to generally promote conservation of nature and natural resources. Its programs include components on wildlife and biodiversity issues. CPR EEC also produces a large number of publications.

- **Centre for Environment Education (CEE), Ahmedabad**

The Centre for Environment Education, Ahmedabad was initiated in 1989. It has a wide range of programs on the environment and produces a variety of educational material. CEE's Training in Environment Education {TEE} program has trained many environment educators.

- **Bharati Vidyapeeth Institute of Environment Education and Research (BVIEER), Pune**

This is part of the Bharati Vidyapeeth Deemed University. The Institute has a PhD, a Masters and Bachelors program in Environmental Sciences. It implements a large outreach programme that has covered over 135 schools in which it trains teachers and conducts fortnightly Environment Education Programs. Biodiversity Conservation is a major focus of its research initiatives. It develops low cost Interpretation Centres for Natural and Architectural sites that are highly locale specific as well as a large amount of innovative environment educational material for a variety of target groups. Its unique feature is that it conducts environment education from primary school level to the postgraduate level.

- **Uttarkhand Seva Nidhi (UKSN), Almora**

The Organization is a Nodal Agency which supports NGOs in need of funds for their environment related activities. Its major program is organizing and training school teachers to

use its locale specific Environment Education Workbook Program. The main targets are linked with sustainable resource use at the village level through training school children. Its environment education program covers about 500 schools.

- **Kalpavriksh, Pune**

This NGO, initially Delhi based, is now working from Pune and is active in several other parts of India. Kalpavriksh works on a variety of fronts: education and awareness; investigation and research; direct action and lobbying; and litigation with regard to environment and development issues. Its activities include talks and audio-visuals in schools and colleges, nature walks and outstation camps, organizing student participation in ongoing campaigns including street demonstrations, pushing for consumer awareness regarding organic food, press statements, handling green alerts, and meetings with the city's administrators. It is involved with the preparation of site-specific, environmental manuals for schoolteachers. Kalpavriksh was responsible for developing India's National Biodiversity Strategy and Action Plan in 2003.

- **Salim Ali Center for Ornithology and Natural History (SACON), Coimbatore**

This institution was Dr. Salim Ali's dream that became a reality only after his demise. He wished to support a group of committed conservation scientists on a permanent basis. Initially conceived as being a wing of the Bombay Natural History Society (BNHS) it later evolved as an independent organisation based at Coimbatore in 1990. It has instituted a variety of field programs that have added to the country's information on our threatened biodiversity.

- **Wildlife Institute of India (WII), Dehradun**

This Institution was established in 1982, as a major training establishment for Forest Officials and Research in Wildlife Management. Its most significant publication has been 'Planning A Wildlife Protected Area Network for India' (Rodgers and Panwar, 1988). The organization has over the years added an enormous amount of information on India's biological wealth. It has trained a large number of Forest Department Officials and Staff as Wildlife Managers. Its M.Sc. Program has trained excellent wildlife scientists. It also has an Environment Impact Assessment (EIA) cell. It trains personnel in eco-development, wildlife biology, habitat management and Nature interpretation.

- **Botanical Survey of India (BSI)**

The Botanical Survey of India (BSI) was established in 1890 at the Royal Botanic Gardens, Calcutta. However it closed down for several years after 1939 and was reopened in 1954. In 1952 plans were made to reorganise the BSI and formulate its objectives. By 1955 the BSI had its headquarters in Calcutta with Circle Offices at Coimbatore, Shillong, Pune and Dehra Dun. Between 1962 and 1979, offices were established in Allahbad, Jodhpur, Port Blair, Itanagar and Gangtok. The BSI currently has nine regional centres. It carries out surveys of plant resources in different regions

- **Zoological Survey of India (ZSI)**

The ZSI was established in1916. Its mandate was to do a systematic survey of fauna in India. It has over the years collected 'type specimens' on the bases of which our animal life has been studied over the years. Its origins were collections based at the Indian Museum at Calcutta, which was

established in 1875. Older collections of the Asiatic Society of Bengal, which were made between 1814 and 1875, as well as those of the Indian Museum made between 1875 and 1916 were then transferred to the ZSI. Today it has over a million specimens! This makes it one of the largest collections in Asia. It has done an enormous amount of work on taxonomy and ecology. It currently operates from 16 regional centers.

- **National Mission for Clean Ganga(NMCG)**

It was reregistered as a society on 12 August 2011 under to societies registration act 1860. It acted as implementation ARM OF National Ganga River Basin Authority (NGRBA) , which was constituted under the provisions of the environment protection act 1986. NGRBA has since been dissolved with effect for the 7 October 2016, consequent to constitution of National Council for Rejuvenation, protection and management of river Ganga. The act five tier structure national, state and district level to take measures for prevention , control and abatement of environmental pollution in river ganga and to ensure continuous adequate flow of water so as to rejuvenate the river Ganga.

People in Environment

There are several internationally known environmental thinkers. Among those who have made landmarks, the names that are usually mentioned are Charles Darwin, Ralph Emerson, Henry Thoreau, John Muir, Aldo Leopald, Rachel Carson and EO Wilson. Each of these thinkers looked at the environment from a completely different perspective.

- **Charles Darwin** wrote the 'Origin of Species', which brought to light the close relationship between habitats

and species. It brought about a new thinking of man's relationship with other species that was based on evolution. Alfred Wallace came to the same conclusions during his work.

- **Ralph Emerson** spoke of the dangers of commerce to our environment way back in the 1840s.
- **Henry Thoreau** in the 1860s wrote that the wilderness should be preserved after he lived in the wild for a year. He felt that most people did not care for nature and would sell it off for a small sum of money.
- **John Muir** is remembered as having saved the great ancient sequoia trees in California's forests. In the 1890s he formed the Sierra club, which is a major conservation NGO in the USA.
- **Aldo Leopald** was a forest official in the US in the 1920s. He designed the early policies on wilderness conservation and wildlife management. In the 1960s.
- **Rachel Carson** published several articles that caused immediate worldwide concern on the effects of pesticides on nature and mankind. She wrote a well-known book called 'Silent Spring' which eventually led to a change in Government policy and public awareness.
- **EO Wilson** is an entomologist who envisioned that biological diversity was a key to human survival on earth. He wrote 'Diversity of Life' in 1993, which was awarded a prize for the best book published on environmental issues. His writings brought home to the world the risks to mankind due to man made disturbances in natural ecosystems that are leading to the rapid extinction of species at the global level.

There have been a number of individuals who have been instrumental in shaping the environmental history in our country. Some of the well-known names in the last century include environmentalists, scientists, administrators, legal experts, educationists and journalists.

- **Salim Ali's** name is synonymous with ornithology in India and with the Bombay Natural History Society (BNHS). He also wrote several great books including the famous 'Book of Indian Birds'. His autobiography, 'Fall of a Sparrow' should be read by every nature enthusiast. He was our country's leading conservation scientist and influenced environmental policies in our country for over 50 years.
- **Indira Gandhi** as PM has played a highly significant role in the preservation of India's wildlife. It was during her period as PM, that the network of PAs grew from 65 to 298! The Wildlife Protection Act was formulated during the period when she was PM and the Indian Board for Wildlife was extremely active as she personally chaired all its meetings. India gained a name for itself by being a major player in CITES and other International Environmental Treaties and Accords during her tenure. BNHS frequently used her good will to get conservation action initiated by the Government.
- **S P Godrej** was one of India's greatest supporters of wildlife conservation and nature awareness programs. Between 1975 and 1999, SP Godrej received 10 awards for his conservation activities. He was awarded the Padma Bhushan in 1999. His friendship with people in power combined with his deep commitment for conservation led to his playing a major advocacy role for wildlife in India.

- **M S Swaminathan** is one of India's foremost agricultural scientists and has also been concerned with various aspects of biodiversity conservation both of cultivars and wild biodiversity. He has founded the MS Swaminathan Research Foundation in Chennai, which does work on the conservation of biological diversity.

- **Madhav Gadgil** is a well-known ecologist in India. His interests range from broad ecological issues such as developing Community Biodiversity Registers and conserving sacred groves to studies on the behavior of mammals, birds and insects. He has written several articles, published papers in journals and is the author of 6 books.

- **M C Mehta** is undoubtedly India's most famous environmental lawyer. Since 1984, he has filed several Public Interest Litigations for supporting the cause of environmental conservation. His most famous and long drawn battles supported by the Supreme Court include protecting the Taj Mahal, cleaning up the Ganges River, banning intensive shrimp farming on the coast, initiating Government to implement environmental education in schools and colleges, and a variety of other conservation issues.

- **Anil Agarwal** was a journalist who wrote the first report on the 'State of India's Environment' in 1982. He founded the Center for Science and Environment which is an active NGO that supports various environmental issues.

- **Medha Patkar** is known as one of India's champions who has supported the cause of downtrodden tribal people whose environment is being affected by the dams on the Narmada river.

- **Sunderlal Bahugna's** Chipko Movement has become an internationally wellknown example of a highly successful conservation action program through the efforts of local people for guarding their forest resources. His fight to prevent the construction of the Tehri Dam in a fragile earthquake prone setting is a battle that he continues to wage. The Garhwal Hills will always remember his dedication to the cause for which he has walked over 20 thousand kilometers.

REVIEW QUESTIONS

Part A

1. What do you mean by knowledge Repository?
2. Give the names of a 4 search engines.
3. What is the use of "I am feeling Lucky" button in search engine.
4. What is cyber presence?
5. What are the activities involved in Cyber presence.
6. Define environmental studies.
7. What is 3R principle in environmental issues.

Part B

1. Why you can say that "Internet is widely used, not wisely used"?
2. Explain some academic search techniques.
3. Explain the features of any 5 academic web sites.
4. Differentiate Renewable and Non-renewable resources.
5. What you mean by sustainable utilization of resources.
6. Explain the importance of public awareness in Environmental studies.
7. Explain about some institutions in Environment.
8. Explain the activities of some well-known Environmental thinkers.

Part C

1. Explain the multidisciplinary nature of Environmental studies.