

Global Issues

Current Scenario

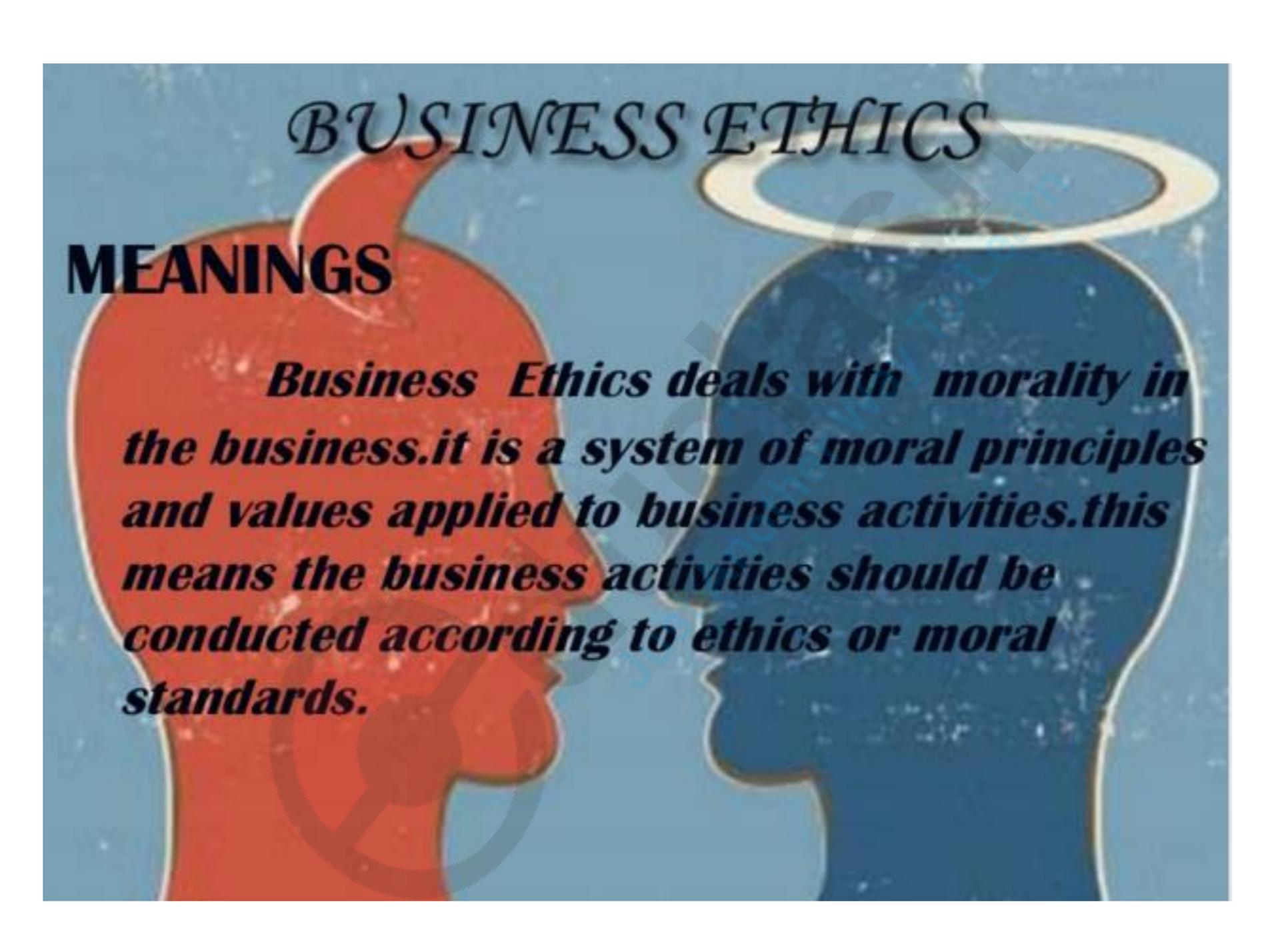
- **Technology Revolution**
- **GLOBALIZATION**

Globalization means integration of countries through commerce, transfer of technology, and exchange of information and culture. In a way, it includes acting together and interacting economies through trade, investment, loan, development schemes and capital across countries. In a different sense, these flows include knowledge, science, technology, skills, culture, information, and entertainment, besides direct human resource, tele-work, and outsourcing. This interdependence has increased the complex tensions and ruptures among the nations.

For the engineers, the issues such as Multinational Organizations, computer, internet functions, military development and environmental ethics have assumed greater importance for their very sustenance and progress.

- Outsourcing
- Impact of Automation
- International Trade : World Trade Organization (WTO)
 1. To organize meetings of member countries to arrive at trade agreements covering international trade
 2. to ensure that member countries conduct trade practices as per agree upon and signed by the member countries.
 3. To provide a platform to negotiate and settle disputes related to international trade between and among member countries.
- World summits : environment, human rights ,population, social development ,food security
- Disaster management
- Issues : social,cultural,economic & ethical .

BUSINESS ETHICS



MEANINGS

Business Ethics deals with morality in the business. it is a system of moral principles and values applied to business activities. this means the business activities should be conducted according to ethics or moral standards.

FEATURES OF BUSINESS ETHICS

- ❑ CODE OF CONDUCT
- ❑ PROVIDE PROTECTION TO SOCIAL GROUP
- ❑ PROVIDE BASIC FRAME WORK
- ❑ NEED WILLING ACCEPTANCE
- ❑ EDUCATION AND GUIDANCE
- ❑ NOT AGAINST FAIR PROFIT MAKING



Two aspects of business

- **Corporate Governance**
- **Financial reporting**

Corporate governance deals with how business are conducted. Corporate governance based on good ethical policies is the framework of a good , successful business.

Some issues with good corporate governance are as:

- ✓ All business practices must be based on corporate social responsibility.
- ✓ Corporate entity should formulate an ethical policy for its own functions and those of its employees .they should be known to all clients and stakeholders.

- ✓ Transparency in dealings, business policies, plans and actions.
- ✓ Communication mechanisms must be present for lateral, top down and bottom up communication to ensure transparent functioning.
- ✓ Business must ensure equity and justice to all stakeholders .
- ✓ Business must respect all governing rules and regulations put forth by the government.

Finance and Accounting

Ethics in accounting practices is no different from good corporate governance. There are well laid rules and regulations for accounting practices.

Following are some of the canons:

- There are well laid norms for acc. practices. Business must follow such practices scrupulously.
- Transparency in accounting is important. No attempt should be made to manipulate accounts to hide financial health of company. (*Satyam scandal- Mr.Ramlinga Raju.....*)

What Happens to Raju Now

PUNISHMENT
For his role in the ₹7,136-crore scam, Ramalinga Raju was sentenced to 7 years in prison and slapped a fine of ₹5 crore

CAN HE BE LET OFF?
Unlikely. The scam resulted in tough conditions being put in Companies Act. Courts will want to send a strong message. Raju is seeking leniency citing poor health and dependents

WHAT NEXT?
A long appeals process is guaranteed. Raju can appeal in the sessions court, high court & Supreme Court

HOW MUCH TIME WILL HE SPEND IN JAIL?
Raju has already spent over 30 months behind bars. If the appeals process holds up the current sentence, Raju is likely to spend another four-and-half years in prison

CBI will also appeal. It plans to ask for a more rigorous sentence



- There are well laid norms for reporting financial aspects of a company and reported to stakeholders during the AGM.
- There should be no dealings that cannot be reported in the accounts or reported in a different way in the accounts.

NEED FOR BUSINESS ETHICS

- CHECKING BUSINESS MALPRACTICES
- IMPROVING CONSUMER CONFIDENCE
- BUSINESSMEN TO BE CONSCIOUS OF SOCIAL RESPONSIBILITIES
- PROTECT CONSUMER RIGHTS
- CREATE GOOD IMAGE OF BUSINESS



PRINCIPLES OF BUSINESS ETHICS

- ❑ **AVOID EXPLOITATION OF CONSUMERS**
- ❑ **UNFAIR TRADE PRACTICES**
- ❑ **ENCOURAGE HEALTHY COMPETITION**
- ❑ **FAIR TREATMENT TO EMPLOYEES**
- ❑ **AVOID PAYMENT OF BRIBE**
- ❑ **RESPECT CONSUMER RIGHTS**
- ❑ **ACCEPT SOCIAL RESPONSIBILITY**

ETHICAL AND UNETHICAL

- ❑ HAVING MORAL VALUES
- ❑ FAIR PRICES
- ❑ FAIR WAGES



- ❑ NO VALUES NO ETHICS
- ❑ SHORT WEIGHTS AND MEASURES
- ❑ SUPPLY INFERIOR QUALITY



ETHICAL V/S UNETHICAL



India and Water extraction

- Varanasi Bottling Plant 2014
- Plachiminda, Kerala Plant 2004
- Kala Dera, near Jaipur, Rajasthan



Kala Dera - Thirsting from Coca-Cola

- Kala Dera is a large village outside the city of Jaipur.
- Agriculture is the primary source of livelihood.
- Coca-Cola started its bottling operations in Kala Dera in 2004, and within a year, the community started to notice a rapid decline in groundwater levels.



COMPANY PROFILE

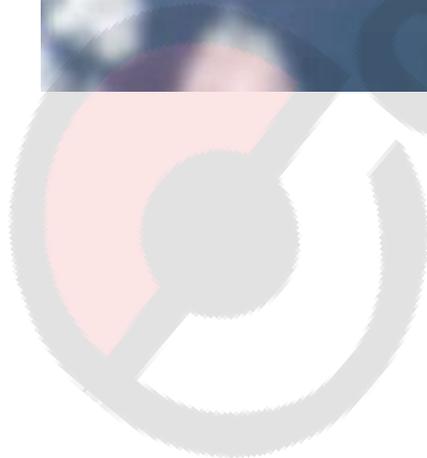
- An American multinational food manufacturing company.
- Headquartered in **Battle Creek, Michigan, United States.**
- Founded on **Feb 19, 1906** by *Will Keith Kellogg*.
- In 2012, Kellogg's became the world's second-largest snack food company (after Pepsico) by acquiring the Pringles Potato Crisps brand.
- Kellogg Company named as one of the 2013 **“World’s Most Ethical Companies”** by the Ethisphere Institute- 5th time Kellogg’s has been recognized with this honour.

“Character will never be produced by money. I’ll invest my money in people.”

— Will Keith Kellogg, Founder, Kellogg’s Company

CONCLUSION

**"GOOD ETHICS IS
GOOD BUSINESS"**



ENVIRONMENTAL ETHICS

Environmental ethics is the study of *moral issues concerning the environment, and moral perspectives, beliefs, or attitudes concerning those issues.*

Engineers in the past are known for their negligence of environment, in their activities. It has become important now that engineers design eco-friendly tools, machines, sustainable products, processes, and projects. These are essential now to

(a) ensure protection (safety) of environment

(b) prevent the degradation of environment,

(c) slow down the exploitation of the natural resources, so that the future generation can survive.



Engineers as experimenters have certain duties towards environmental ethics, namely:

1. ***Environmental impact assessment:*** One major but sure and unintended effect of technology is wastage and the resulting pollution of land, water, air and even space. Study how the industry and technology affects the environment.
2. **Establish standards:** Study and to fix the tolerable and actual pollution levels.
3. **Counter measures:** Study what the protective or eliminating measures are available for immediate implementation
4. **Environmental awareness:** Study on how to educate the people on environmental practices, issues, and possible remedies.

Following are some major issues that concern environment ethics today :

- ✓ **Anthropocentrism -human centeredness**
- ✓ **Conservation of biodiversity**
- ✓ **Energy conservation**
- ✓ **Global climate change**
- ✓ **Overpopulation and destruction of forest or animal habitat**
- ✓ **Depletion of natural resources**
- ✓ **Genetic engineering,cloning,genetically modified foods**
- ✓ **Waste disposal and e-waste**
- ✓ **Intensive farming and overuse of pesticides**
- ✓ **Ozone depletionand many more**

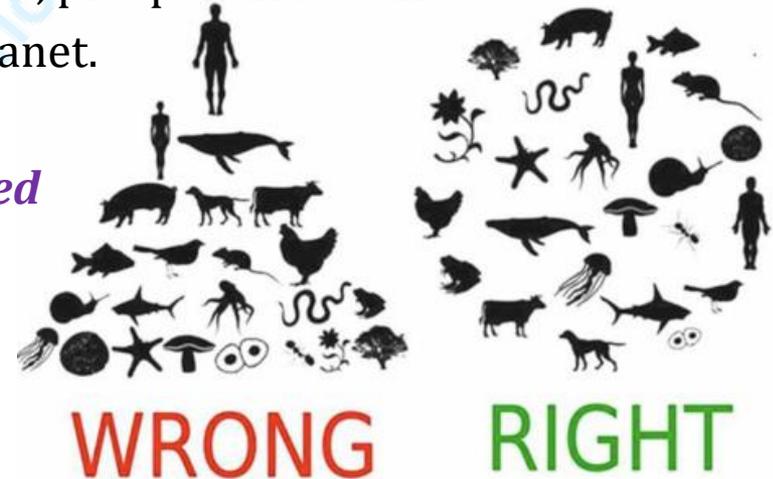


Anthropocentrism, philosophical viewpoint arguing that human beings are the central or most significant entities in the world. Anthropocentrism regards humans as separate from and superior to nature and holds that human life has intrinsic value while other entities (including animals, plants, mineral resources, and so on) are resources that may justifiably be exploited for the benefit of humankind. This is a basic belief embedded in many Western religions and philosophies.

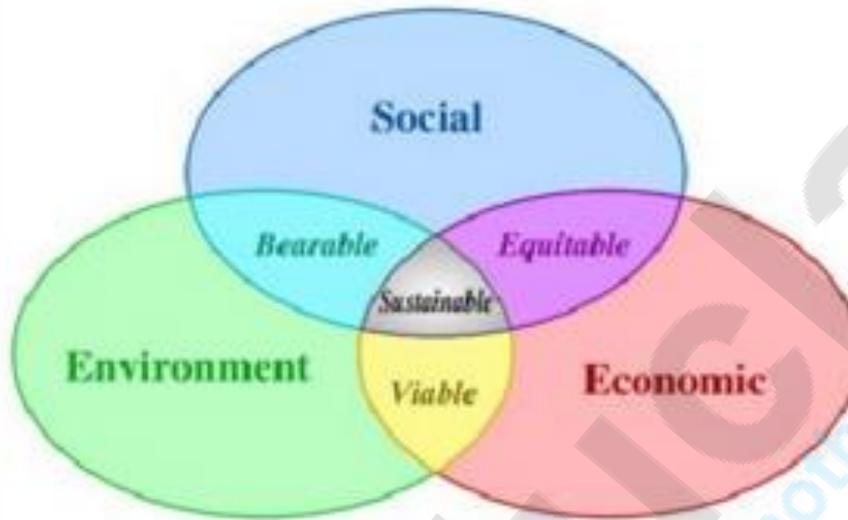
Anthropocentrism is an extended form of egoism .

The philosophical view that gives equal importance to all living forms and recognizes their right can be called biocentrism. Biocentrism puts all living elements in one basket recognizing their right to live, prosper and coexist and also share equally resources available in the planet.

Some ethicists feel that a change in outlook, called as prudential or benign anthropocentrism is sufficient for overcoming crisis.



Sustainable Development



It means development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

It is a pattern of resource utilization that meets the needs of the present but at the same time takes care of the needs of posterity.

The three major competing requirements of this model are as shown in fig.

Environment society and economy.

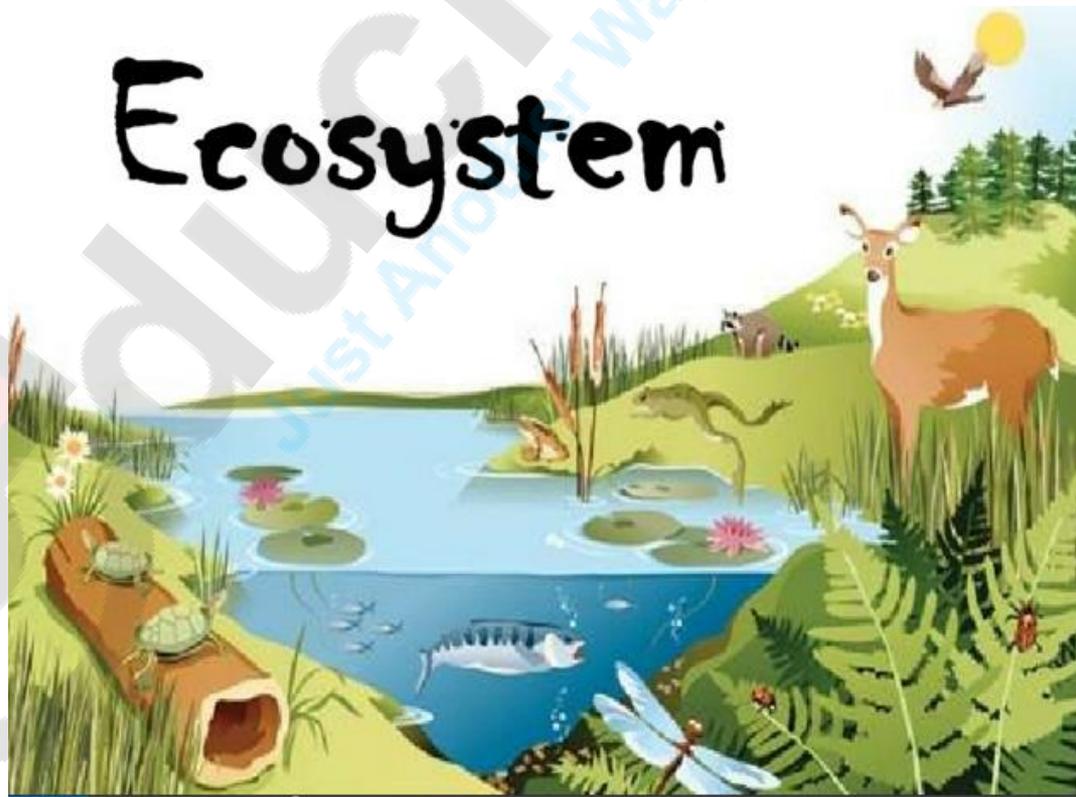
3 pillars of sustainable tourism

- **environmental sustainability:** emphasizes the protection and conservation of the environment
- **economic sustainability:** increasing incomes and employment, foreign exchange earnings, public revenues, poverty alleviation, business development and investment to stimulate local economies
- **socio-cultural sustainability:** harmonises with social values and cultural integrity

Ecosystem

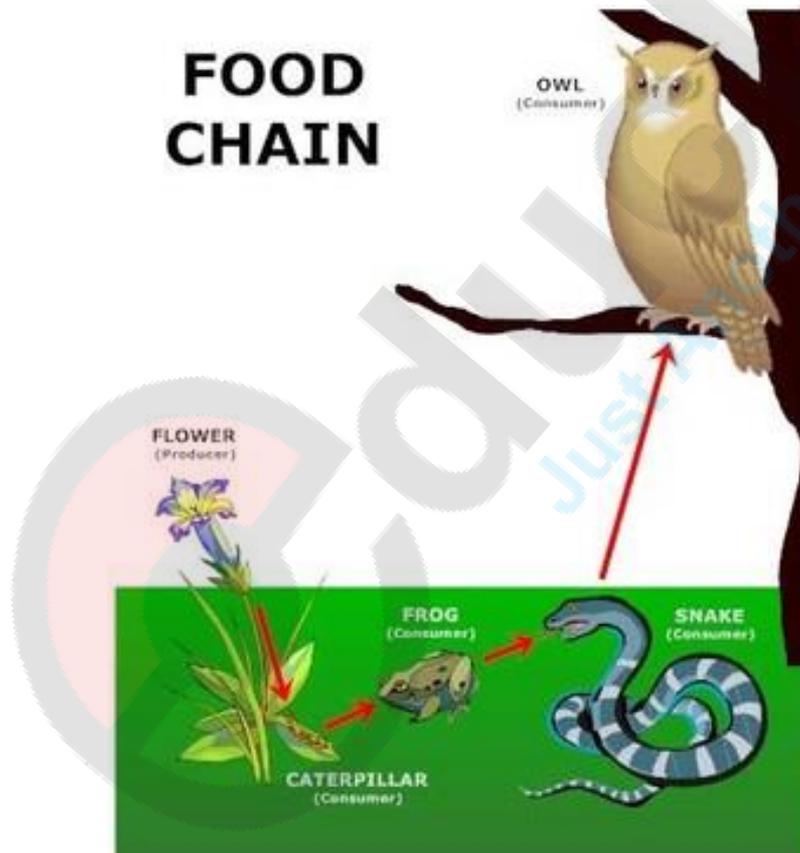
The term ecosystem was coined by Roy Clapham in 1930. It is a combination of physical and biological components of an environment. Central idea is the fact that the living organisms of the ecosystem interact with every other element of the ecosystem. The elements of the ecosystem are interdependent for their survival. Ecosystem is classified as :

- Terrestrial
- Aquatic
- Marine
- Desert
- Rainforest



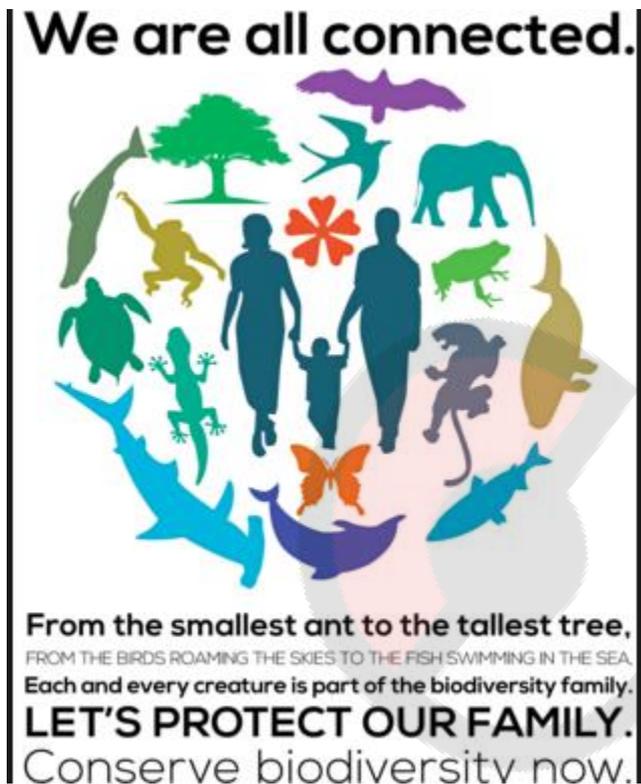
Food chain and Food web :

many studies on ecosystem have proved the existence of food chains. Food chains are linear depictions of how the energy needs of life forms are taken care of in nature .it is a sequence through which energy transfer takes place to sustain life.



Biodiversity

It is often defined as the totality of genes, species and ecosystem of a region. The term biodiversity refers to the myriad variety of life forms thriving in an ecosystem. It is rich in tropical forest, both in terms of flora and fauna. It has been observed that development activities have disturbed ecosystem in many parts of the world and many species have become extinct.



Extinct Birds Of The World

EXTINCT BIRDS OF THE WORLD



Indian Vulture



Name: Indian Vulture

Class: Aves
Status: Critical
Endangered
Habitat: India

Range: below 300

Reason: Breeding
problem

Top 10 Most Endangered Plants

- Milkwort - Gujarat
- Bird's foot - Gujarat
- Assam catkin yew - Arunachal Pradesh
- Moa - Karnataka
- Ebony tree - Karnataka
- Umbrella tree - Tamil Nadu
- Indian mallow - Tamil Nadu
- Musli - Tamil Nadu
- Jeemikanda - Rajasthan
- Spider wort - Madhya Pradesh



India's Endangered Plant Species



Climate changes:

Years ,climate in various places has undergone perceptible changes. In India, delayed monsoon, excessive rains floods, Droughts etc have become common. All these are due to man made causes. The factors that contribute to climate changes are called climate forcing. Changes in Solar radiation pattern ,changes in earths orbit concentration of green house gases....its all man made

What causes Earth's climate to change

CAUSES :

- Global warming
- Green house gases
- Ozone layer depletion
- Changes in the sun
- Human activities



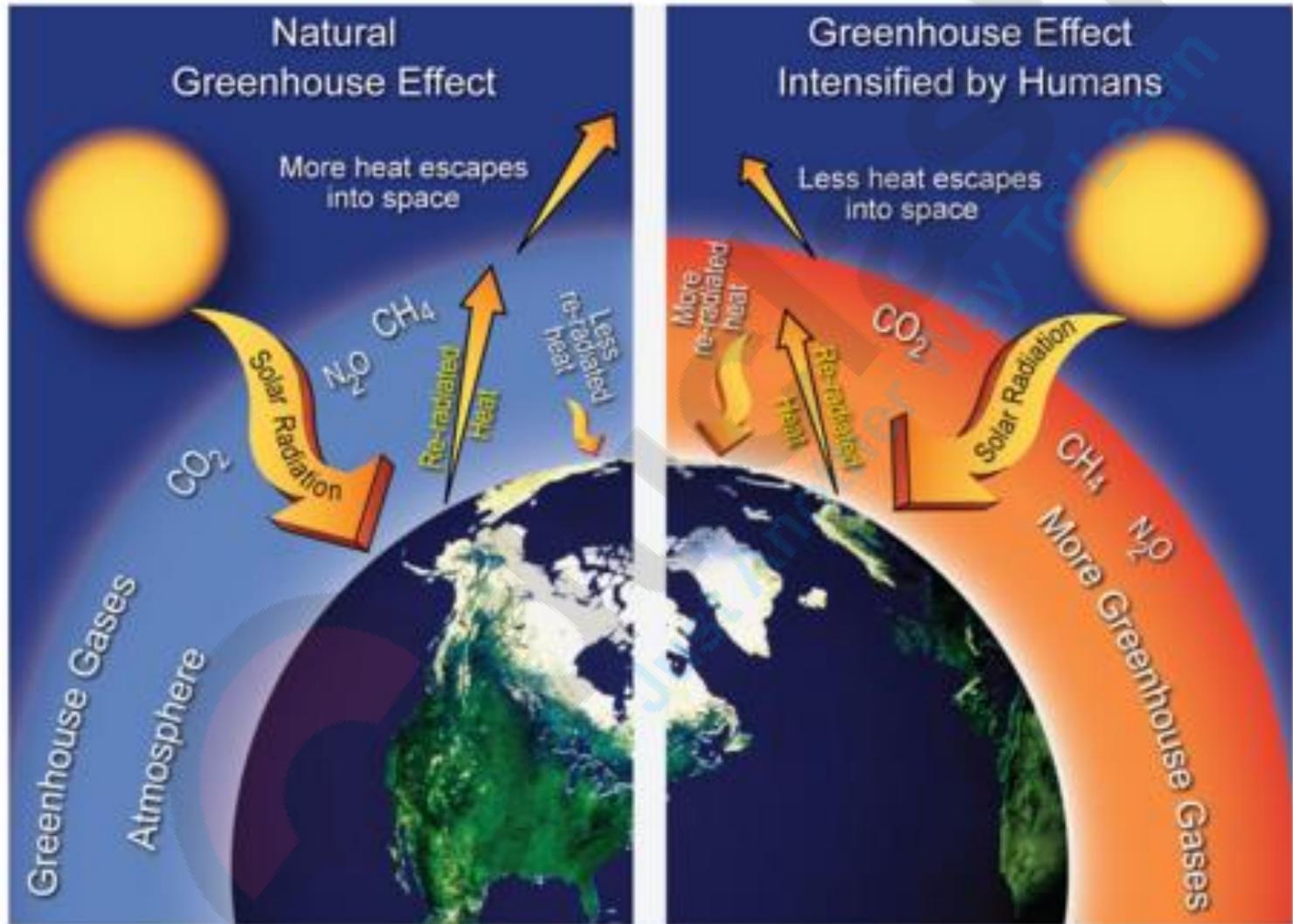
The infographic features a background of a blue sky with white clouds and green grass. At the bottom left, there is a small globe and a white cup. A large, faint watermark 'www.knowmore.com' is visible across the center.

Green house effect:



The green house effect is due to presence of green house gases in atmosphere. Water vapour, methane, CO_2 , ozone, chlorofluorocarbon. These gases have effect of trapping infrared radiation, which is essential heat radiation. This trapped heat is radiated upwards and downwards,

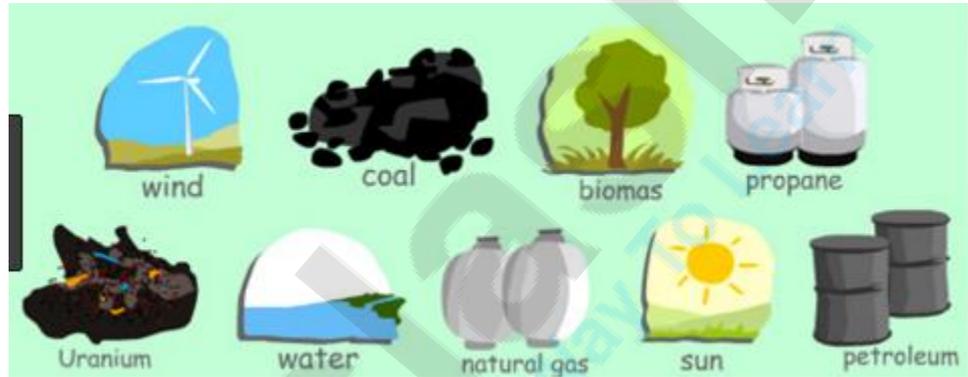
Human Influence on the Greenhouse Effect



Global warming



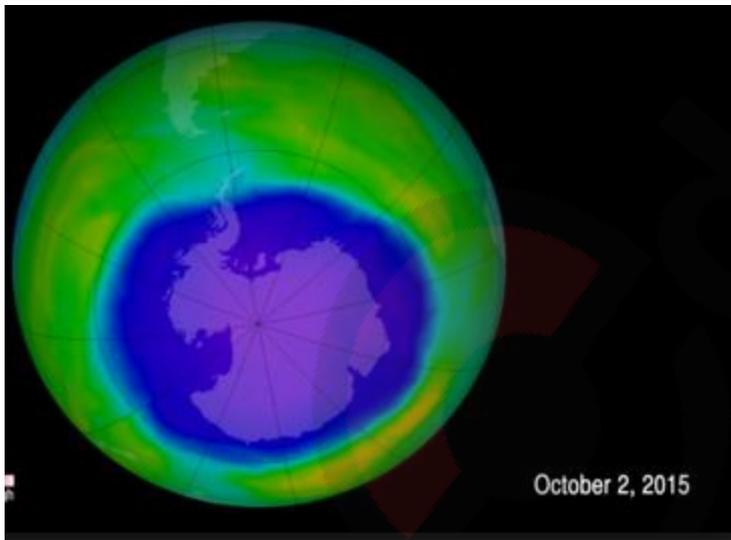
Energy Concerns



Ozone depletion

Ozone is a layer of gas found in stratosphere yrs have witnessed 4 cent per decade depletion of the volume of ozone gas. Larger depletion has been found at polar regions called as ozone holes.

Depletion is due CFC in atmosphere which breaks down the ozone. CFCs are present commonly in refrigerants. Ozone prevents harmful UV rays from reaching earth's atmosphere as thy are harmful to plants and animals. This is also main cause of skin cancer in humans.



Effect on Human Health:

OFFICERS IAS ACADEMY
IAS ACADEMY BY IAS OFFICER

Damage genetic materials in the cells.
Leads to more people suffering from Cataracts.
Causes cancer, allergies and some other infectious disease.

10% depletion in ozone layer results in 30% increase in skin cancer infection.



Pollution

Contamination of three elements –air, water and land of the biosphere . This leads to many diseases of the life forms in the biosphere.

Air Pollution:

- ✓ Combustion from Industry
- ✓ Aerosols and CFCs
- ✓ Transportation Emissions
- ✓ Agriculture Side-Effects
- ✓ Volcano Eruptions
- ✓ Forest Fires
- ✓ Metal Smelting ,burning of fossil fuel,cooking,power stations, extensive mining, in war zones etc

Causes: eye irritation,respiratory diseases, acid rains, global warming, ozone depletion.



Land Pollution :-

- ✓ Deforestation/Erosion
- ✓ Agriculture
- ✓ Industry
- ✓ Mining
- ✓ Landfills/Waste
- ✓ Urbanization/Construction



Land pollution kills the ecosystem, damages to crops ,kills animals ,birds.

- Organic farming
- Waste recycling
- Garbage

Water Pollution

Sewage And Waste Water

- Dumping
 - Industrial Waste
 - Oil Pollution
 - Acid Rain:
 - Global Warming
 - Eutrophication
-
- Industrial Treatment
 - Denitrification
 - Ozone Waste Water Treatment
 - Septic Tanks



Noise Pollution

- Vehicular Noise
- Industrial Noise
- Commercialization of residential areas
- Domestic Noise
- Construction activities
- Fireworks
- Social events



Ethical issues :

- ✓ All life forms have intrinsic value.
- ✓ Use of Environment friendly technologies .
- ✓ Efficient mechanism to monitor unethical actions by member countries.
- ✓ View of how nature will take care and balance things by itself.
- ✓ How can countries,corporates ,entities and individuals to mitigate the crisis we face today

Computer Ethics

- Ubiquitous tools that have affected our lives immensely.
- Digital machines with the capacity to store, retrieve and process data at greater speed.
- Computers today have become akin to media.
- Internet has become a source to all of the things that a medium can offer.
- This technology utilizes services of many professionals as h/w engineers/w professionals, system analyst, network specialist etc.
- ITES have formed backbone of all developments in 3 sectors: primary agriculture, secondary industry sector, tertiary sector of service.

- Manufacturing and marketing of computers
- Software
- Cyber crimes
 - Unsolicited mails promotional materials
 - Data stealing
- Embezzlement
- Hacking
 - Ethical
 - Unethical



Media Ethics

Media covers a wide range of instruments that are used to convey information for entertainment and for education.

Media can be classified as:

1. **Print media:**

books, journals, magazines newspapers .

2. **Non print media:** e-versions of

books, journals, magazines, newspapers, e-editions

others-audio tapes, disc, photographs, digital images, video tapes or disc, radio broadcast, television, satellite transmissions, films etc.

3. **Internet**

4. **Mobile services**

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Electro-Magnetic Easy Cooking Machine

Offer rate
₹ 1999/-
With 2 Months Warranty

Features:

- No Smell, No Noise
- Compact, Modern, Stylish
- No. Plates, Pots, Cook in Only 8 Minutes
- No. Water, Cooks in Only 15 Minutes
- 100% Cheap, 100% Safe, 100% Safe Than Gas

Features of Electro-Magnetic Easy Cooking Machine:

- No Smell, No Noise, No Gas Cook With No or 0.2 lit.
- No Smoke or Heat, Saving Resources and Health also Saves 100% Fuel Cost
- Light Weight and Convenient For Travelling and Office
- Portable, 100% Environmentally Safe, Saving Health Hazard by Avoiding of Gas.

Special Offer
For First 50 Customers Special Price, Offer For Cooking With No Smoke From

ORDER NOW **₹ 1999/-** **922 345 1000 / 922 345 2000**



Newspaper

Int



rnet

Roles of media

With the event of broadcasting technologies, media has become a powerful instrument of social awakening. It is a powerful pillar of our society and hence its roles are very crucial.

- Information role
- Entertainment role
- Education role
- Analysis role

Positive aspects of Media

The impact of mass media also can be positive or negative. Now let us list some of the positive and negative effects of media.

- Media provide news and information required by the people.
- Media can educate the public.
- Media helps a democracy function effectively
- Media can entertain people.
- Media can act as an agent of change in development.
- Media has brought people of the world closer to each other.
- Media promote trade and industry through advertisements
- Media can help the political and democratic processes of a country.
- Media can bring in positive social changes.

Negative aspects of media

- The traditional culture of a country is adversely affected by mass media.
- Entertainment has become the main component of mass media. This affects the primary objectives of media to inform and educate the people.
- Media promote violence. Studies have proved that violence shown on television and cinema have negative effects on children.
- Mass media promote the desire in people to buy and own products that are advertised through the media but which may not be essential for them.

Sting operations: bring to light corruption and malpractices.

Shocking and tasteless reporting is another negative aspect of Mediadetails of war, murder ,offensive contents .

Social Media

Web has extended technology to help users to create ,share and exchange information, create network and communities of common interest or otherwise and share photographs and videos.



- Internet based applications, freely available
- Displays user generated content
- User can create their own profile
- Helps to create social networks and communities
- Increased reach through mobile apps.

• Positive Aspects

- ✓ User can create own profile for better job opportunities.
- ✓ Content development.
- ✓ With mobile apps flow of information is useful in emergencies and disasters.
- ✓ Interaction between people with common interest
- ✓ People get news views through social media sites.

• Negative Aspects

- χ Authenticity of information
- χ Privacy id invaded
- χ Abuse for revange,sadistic fun is common
- χ Pirated videos, obscene material
- χ Rumors spread faster
- χ Accountability and responsibility are missing
- χ people spend hours on social media ,negligence of duties.



Ethics for Journalists

- Respect privacy on an individual.
- Avoid recording interviews and phone conversations
- Avoid sensationalizing news.
- With a view to be the first and exclusive, do not publish unauthenticated news.
- Avoid publishing suggestive guilt
- Respect the right to reply of individuals
- Avoid glorifying violence and social evils
- do not publish ads that malign or hurt religious sentiments

The society of professional journalists has simple code of ethics:

- Seek and report truth
- Minimize harm
- Act independently
- Be accountable

Advertising Ethics

- Reflect the true character and features of the item being advertised.
- It should be impartial ,not only favorable features and hide facts that show the products in poor light.
- Ads should not be against social norms and public decency ,hurting sensitivity of people.
- Ads should not hurt the religious sentiments of people.
- Ads should not incite people to violence or cause public disorder ,etc.



Burger King regrets pairing Hindu goddess and hamburger

Bioethics

- Bioethics deals with the issues of biology and medicine.
- Bioethics is defined as the philosophical study of ethical questions arising out of development in biology and medicine.
- Bioethics covers a wide range of areas such as abortion, euthanasia, surrogacy, genetic engineering, suicide, cloning and health care issues.

➤ **Abortion**

Abortion also called as medical termination of pregnancy, is ending life of fetus before birth.

- Does any one have the right to take the life of a child?
- Can abortion be ethical? What mitigating circumstances can make this practice legal?
- How does one deal with this menace? Is the law a sufficient deterrent?
- Which is more desirable, legal protection for the child or a mass movement to educate parents?



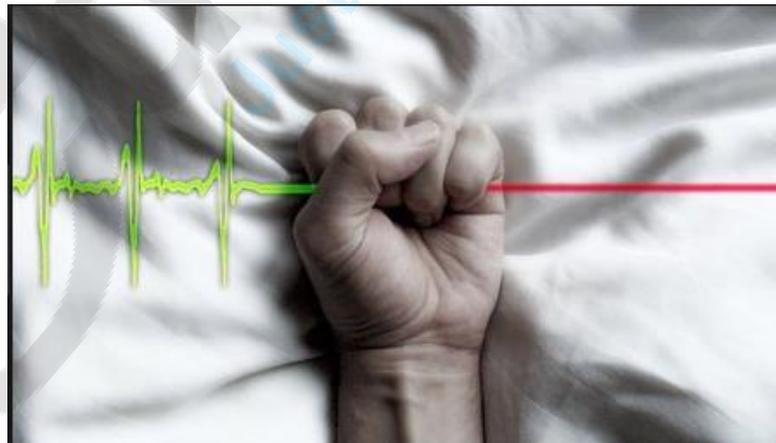
Indian Abortion Law:

- The MTP Act came into effect from 1 April 1972 and was amended in the years 1975 and 2002.
- Pregnancies not exceeding 12 weeks may be terminated based on a single opinion formed in good faith. In case of pregnancies exceeding 12 weeks but less than 20 weeks, termination needs opinion of two doctors. The Medical Termination of Pregnancy (MTP) Act of India clearly states the conditions under which a pregnancy can be ended or aborted, the persons who are qualified to conduct the abortion and the place of implementation. Some of these qualifications are as follows:
 - Women whose physical and/or mental health were endangered by the pregnancy.
 - Women facing the birth of a potentially handicapped or malformed child.
 - Rape.
 - Pregnancies in unmarried girls under the age of eighteen with the consent of a guardian.
 - Pregnancies that are a result of failure in sterilization.

Euthanasia :

Euthanasia or mercy killing is the termination of life for a variety of reasons. In India, euthanasia is illegal. In some countries it is legal for terminally ill patients.

- Can the quality of life be a sufficient reason to allow a person or his/her relatives to end his/her life?
- Can suffering from pain eternally be a reason for allowing mercy killing?
- What mitigating circumstances should be there to allow a person to end his/her life?
- To what extent should the quality of life deteriorate for one to decide that life is not worth living?



Euthanasia in India



- **Passive** Euthanasia is legal in India.

As per the law was passed by the Supreme Court of India in 2011 as a means to legally withdraw life support in patients who are in a permanent vegetative state.

- **Active** Euthanasia which includes the administration of lethal compounds for the purpose of ending life, is still illegal in India, and in most countries.



Surrogacy

- Surrogacy, meaning substitute, is a term used to refer to the concept of someone substituting for the mother taking the burden of pregnancy and delivery.
- Once the task is over, role of surrogate mother ends here.
- It is commonly done through embryo transplantation.
- Commercial surrogacy, which is more common, is like a service rendered by a woman for which she charges an amount.
- Surrogacy is illegal in many countries.
- It is reported in India due to poverty, many women take surrogate motherhood for money.
- There is no law governing the contract between the biological parents and the surrogate mother.

SURROGACY IN INDIA NOT AN ORPHAN ANYMORE

Surrogacy (Regulation) Bill, 2016

Union Cabinet has approved a draft bill to regulate and formulate a mechanism to commission surrogacy in India. The aim of the new legislation, which will now have to be passed by the Parliament, is to:

- **Safeguard the rights of surrogate mothers**
- **Make parentage of surrogate children legal and transparent**
- **Evolve a statutory system for commissioning of surrogacy**
- **Prohibit foreigners from commissioning surrogacy in India**

KBK Infographics



Who can go for surrogacy programme ?

It is most suitable for women with

- **Repeated IVF Failures**
- **Recurrent miscarriages**
- **Absent uterus (Congenital/ post surgical)**
- **Damaged uterus (Infection)**
- **Medical conditions which prohibit pregnancy**
- **Single parent**





The ethical issues in surrogacy are:

- ✓ Genuine case where biological parents are not able to conceive
- ✓ Exploitation of poverty among people who take surrogate mothers at less fees and middle men who earn
- ✓ Relation between the surrogate mother and the child who is brought up by biological parents should be considered.
- ✓ Contract between biological parents and surrogate mother needs legal protection. It should not lead to claims and counter claims a later stage.
- ✓ Childs feeling towards the parents and surrogate mother is a tricky issue.

Cloning :

Cloning is a very complex process .In simple terms ,cloning is biological photocopying. You have a original life form that is studied and a similar one is made by a process that is not a natural process of biological reproduction.

Cloning is thus a process of producing genetically similar or identical life forms such as bacteria,plants,insects,animals and even human beings.

- In biotechnology ,cloning refers to th e process of creating the copies of DNA fragments or cells or reproducing copies of a whole organism.
- Clonning cannot be said completely sucessful
- Experiments are carried out for years an dmany attemps made are partly sucessful
- The experience with animals cloning has shown that the resulting animal is born with many genetic defects and does not survive for long time.
- Cloning is : embryo, reproductive and therapeutic

Ethical concerns to cloning:

- Are we playing God where we are using cloning to reproduce human?
- When an embryo is used ,we destroy it do we have the right?
- In future it is possible that humans can be cloned .what is the cloned ones right v/s original human beings from whom he/she is cloned
- Do we have right to take organs from cloned individual to save a human being?
- Can it create monster with immense power?
- What is the status of cloned children in society?
- Is research in this area a ethical process?

Genetics

Genetics or genetic engineering deals with genes, their transplantation and creation of new life forms and crossing species boundaries .

- This has been a controversial aspect of research in genetics.
- Genetics is defined as a collection of techniques used to isolate genes, modify genes so that function better ,prepare genes that can be inserted into new species and develop trans genes.
- The use of animals in many genetic experiments can have serious consequences for humans and animals as well.

The issues are:

1. The ethicality of research.
2. Lack of knowledge about risk associated with such research and the difficulty of predicting them .
3. Effect on biosphere where such genetically modified life forms are introduced.
4. Technology which is misused.

Research Ethics

- Research is fundamental to human development.
- It is essential for development and self reliance.
- India spends a very less amount on research, less than 1% of the gross domestic product (GDP).
- Research is normally an interdisciplinary and creative endeavor.
- Research is categorized into :
 - 1. Fundamental Research
 - 2. Applied Research

Features of Research

- Outcome of research is not always certain.
- Research required specially skilled people.
- Research is quite expensive in terms of elaborate instrumentation and experimentation and the risk of 'no result' involved.
- Research must lead to some product useful to society and must result in a business proposition for investing money.

Objectives of Research

- Create new knowledge
- Use the created knowledge to develop products and services that are useful to society.
- Understand yourselves and the world around you so that you can easily and sensibly negotiate and overcome problems.

Research Skills

- **Critical Thinking** : Ability to analyze any given situation without accepting at face value.

It includes ability to make a judgments based on different sets of arguments using reasoning and logical thinking.

- **Problem Solving** : Ability to design and analyze problem, find multiple solutions if they exists and select a solution after optimizing. Any new problem require its solution, innovative thinking, identification of a variety of approaches for solution, analytical ability, reasoning and ability to experiment.

- **Analysis** : Ability to obtain useful information from observed data, representing them appropriately, reduction of data and deduction from the patterns of data.

Requires statistical tools to derive information.

- **Dissemination** : It is the communication to the scientific community. Includes summarization of information, report writing and ability to present.

Ethical Aspects

- To promote the aims of research, the researcher should follow the norms of research, written or otherwise. Any falsification, fabrication or misrepresentation of research data is unethical.
- Most research work today involves cooperation and collaboration by different people from different disciplines, institutions and even countries.
- Values that are essential in such collaborative research work includes trust, accountability, mutual respect and fairment.

- Research guidelines also include the researchers accountability to the public in terms of misconduct, conflict of interest, human and animal subjects protection and usefulness of research to the public, particularly when public money is spent on research projects.
- Ethical standards in research also garner public support for further funding based on the usefulness, quality and integrity of research
- Ethics in research also helps to promote moral and social values in general.

Intellectual property rights

- IPR is a global issue.
- IPR can be defined as the right to the creation of one's mind or intellect.
- It can be in any forms like artistic, literary work, scientific invention, designs etc.
- IPR once established enables the individual to claim exclusive right to exploit his/her creation commercially.
- Others cannot exploit somebody's creation without his/her consent or by making some financial or other arrangements with him/her to use that invention

Purpose and Advantages of IPR:

- It is basically an incentive for the innovators.
- IPR helps companies invest in research and innovation .
- IPR protect long tradition and rich heritage associated with famous products and geographical territories.

Domains of IPR:

➤ **Patents :**

Patents are granted for original inventions or improvements of existing products. They bestow the owner a right such that others are not allowed to exploit the invention without permission or license from the owner.

➤ **Trademarks :**

A trade mark is verbal, visual or combination symbol that distinctly identifies product or services provided by a person or a business entity.

The essential purpose of a trademark is to distinguish products produced by the company owning trademark from similar products produced by others.

- ✓ Trade mark helps consumer identify a product or service and the origin of manufacture.
- ✓ Help the company to advertise the product.
- ✓ Act as guarantee for quality.
- ✓ Creates confidence amongst consumers, helps in branding
- ✓ company products.





BIS hallmark



Agmark



ISI mark



FPO mark

Copyright :

It is essential for the protection of artistic and literary works. Today wide range of articles ,books,maps,dramatic works,paintings,sound recordings,films,photographs ,computer programs etc .

The sign of © indicate the presence of copyright protection \ along with the copyright holder.

Geographical Indications

It is a recent addition in IPR.This has been done to protect the quality and territorial identity of products that are famous and Have high credibility among consumers.

They cover natural, agricultural or manufactured goods that are known by their geographical territory production.

EXAMPLES OF GIs

INDIA

- **Basmati rice**
- Mysore silk
- Mysore sandalwood oil
- Mysore sandal soap
- Mysore jasmine
- Coorg orange
- Madhubani paintings
- **Darjeeling tea**
- **Dharwad pedha**
- Alphonso mango
- **Tirupathi laddu**
- Kolhapuri chappal
- Nanjangud banana



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Dharwad pedha: A pair of Dharwad pedhas. The GI status is granted to identify a product as having a specific geographical origin and which retains quality or reputation associated with that origin.



WORLD

- Canadian whisky
- Swiss watches
- Florida oranges
- Champagne
- Tequilla.

5

Professionals and Ethics

- Professionals play a very important role in research ,design , construction etc.
- Professionals need to find solutions or take decisions on ethical aspects of a problem
- Knowledge of ethical theories can help to decide appropriate course of action
- One should keep in mind the basic ethical principles like beneficence,less harm,justice,repsect,truthfulness non violence etc.
- They have great responsibility in taking right decision
- They have to convince themselves and also other of the righteousness of the action.