

UNIT-4

Intellectual Property Laws:

Introduction-

Intellectual property law deals with the rules for securing and enforcing legal rights to inventions, designs, and artist works. Just as the law protects ownership of personal property and real estate so too does it protect the exclusive control of intangible assets. The purpose of these laws is to give an incentive for people to develop creative works that benefit society, by ensuring they can profit from their works without fear of misappropriation by others.

OR

Broadly speaking, **Intellectual Property law** is the **legal** protection of creative **property** ownership. A lawyer working in the field of IP may also encounter cases of duplication, or infringement, or agree the usage rights of an upcoming product or service.

Why is IPR Important?

Intellectual property protection is critical to fostering innovation.

Without protection of ideas, businesses and individuals would not reap the full benefits of their inventions and would focus less on research and development. Similarly, artists would not be fully compensated for their creations and cultural vitality would suffer as a result.

The purpose of intellectual property rights is to encourage new creations, including technology, artwork, and inventions, that might increase economic growth. Intellectual property rights increase the incentives for individuals to continue to produce things that further create job opportunities and new technologies, while enabling our world to improve and evolve even faster.

According to The U.S. Chamber of Commerce's Global Innovation Policy Center:

- **Intellectual Property Creates and Supports High-Paying Jobs**

IP-intensive industries employ over 45 million Americans and hundreds of millions of other people worldwide. The average worker in an IP-industry also earns about 46% more than his or her counterpart in a non-IP industry.

- **Intellectual Property Drives Economic Growth and Competitiveness**

America's IP is worth approximately US\$6.6 trillion, which is more than the nominal GDP of any other country in the world. IP-intensive industries account for over 1/3– or 38.2%– of total U.S. GDP. 52% of all U.S. merchandise exports are related to IP, and this amounts to nearly US\$842 billion.

Types of Intellectual Property Rights-

Intellectual property can consist of many types of intangibles, and some of the most common are listed below.

- Patents. A patent is a **property** right for an investor that's typically granted by a government agency such as the U.S. Patent etc.
- Trademarks. ...
- Copy right
- Trade Secrets.

1. Patent

A patent is used to prevent an invention from being created, sold, or used by another party without permission. Patents are the most common type of intellectual property rights that come to people's minds when they think of intellectual property rights protection.

A Patent Owner has every right to commercialize his/her/its patent, including buying and selling the patent or granting a license to the invention to any third party under mutually agreed terms.

There are three different categories that patents can fall under:

- **Utility:** A utility patent protects the creation of a new or improved product, process, composition of matter, or machine that is useful.

An example of utility patent: Method for a driver assistance system of a vehicle US9772626B2

- **Design:** A design patent protects the ornamental design on a useful item.

An example of design patent: Electric bicycle USD845178S1

- **Plant:** A plant patent protects new kinds of plants produced by cuttings or other nonsexual means.

An example of plant patent: Grape myrtle plant named 'JM1' USPP31585P2

2. Trademark

Trademarks are another familiar type of intellectual property rights protection. A trademark is a distinctive sign which allows consumers to easily identify the particular goods or services that a company provides.

Some examples include McDonald's golden arch, the Facebook logo, and soon. A trademark can come in the form of text, a phrase, symbol, sound, smell, and/or color scheme. Unlike patents, a trademark can protect a set or class of products or services, instead of just one product or process.

3. Copyright

Copyright does not protect ideas. Rather, it only covers "tangible" forms of creations and original work—for example, art, music, architectural drawings, or even software codes.

The copyright owner has the exclusive right to sell, publish, and/or reproduce any literary, musical, dramatic, artistic, or architectural work created by the author.

4. Trade Secret

Trade secrets are the secrets of a business. They are proprietary systems, formulas, strategies, or other information that is confidential and is not meant for unauthorized commercial use by others. This is a critical form of protection that can help businesses to gain a competitive advantage.

Although intellectual property rights protection may seem to provide a minimum amount of protection, when they are utilized wisely, they can maximize the benefit and value of a creation and enable world-changing technology to be developed, protected, and monetized.

The Real Value of Intellectual Property

For some companies, IP assets are actually **worth** significantly more than their physical assets. According to a U.S. Department of Commerce report from March 2012, U.S. **intellectual property** today is **worth** approximately \$5.06 trillion equivalent to 35% of the GDP.

Objective of Intellectual Property-

The main objective of intellectual property law is to encourage innovation and to provide incentives for innovation by granting protection to inventors that will allow them to recover research and development investments and reap the **benefits** of their inventions for a limited period of time

Field in which Intellectual Property can apply-

“Intellectual property shall include rights relating to:

- 1) Literary, artistic and scientific works.
- 2) Performances of performing artists, phonograms and broadcasts.
- 3) Inventions in all fields of human behavior.
- 4) Scientific discoveries.
- 5) Industrial designs.
- 6) Trademarks, service marks, and commercial names and designations.
- 7) Protection against unfair competition and all other rights resulting from intellectual activity in industrial scientific, literary or artistic fields”.

Questions:

1. What is a Patent?

A Patent is a statutory right for an invention granted for a limited period of time to the patentee by the Government, in exchange of full disclosure of his invention for excluding others, from making, using, selling, importing the patented product or process for producing that product for those purposes without his consent.

2. What is the term of a patent in the Indian system?

The term of every patent granted is 20 years from the date of filing of application. However, for application filed under national phase under Patent Cooperation Treaty (PCT), the term of patent will be 20 years from the international filing date accorded under PCT.

3. Which Act governs the patent system in India?

The patent system in India is governed by the Patents Act, 1970 (No.39 of 1970) as amended by the Patents (Amendment) Act, 2005 and the Patents Rules, 2003. The Patent Rules are regularly amended in consonance with the changing environment, most recent being in 2016.

4. Does Indian Patent give protection worldwide?

No. Patent protection is a territorial right and therefore it is effective only within the territory of India. There is no concept of global patent. However, filing an application in India enables the applicant to file a corresponding application for same invention in convention countries or under PCT, within or before expiry of twelve months from the filing date in India. Patents should be obtained in each country where the applicant requires protection of his invention.

5. What can be patented?

An invention relating either to a product or process that is new, involving inventive step and capable of industrial application can be patented. However, it must not fall into the categories of inventions that are non- patentable under sections 3 and 4 of the Act 1970.

6. What are the criteria of patentability?

An invention is patentable subject matter if it meets the following criteria –

- i. It should be novel.
- ii. It should have inventive step or it must be non-obvious
- iii. It should be capable of Industrial application.
- iv. It should not attract the provisions of section 3 and 4 of the Patents Act 1970.

7. What types of inventions are not patentable in India?

An invention may satisfy the condition of novelty, inventiveness and usefulness but it may not qualify for a patent under the following situations:

- i) An invention which is frivolous or which claims anything obviously contrary to well established natural laws.
- ii) An invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment;
- iii) The mere discovery of scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substance occurring in nature.
- iv) The mere discovery of a new form of a known substance which does not result in enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process,

machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Explanation: For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regards to efficacy.

- v) A substance obtained by mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance
- vi) The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way.
- vii) A method of agriculture or horticulture.
- viii) Any process for medicinal, surgical, curative, prophylactic (diagnostic, therapeutic) or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.
- ix) Plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals.
- x) A mathematical or business method or a computer program per se or algorithms.
- xi) A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions.
- xii) A mere scheme or rule or method of performing mental act or method of playing game.
- xiii) A presentation of information.
- xiv) Topography of integrated circuits.
- xv) An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.
- xvi) Inventions relating to atomic energy.

8. When should an application for a patent be filed?

An application for a patent can be filed at the earliest possible date and should not be delayed.

An application filed with provisional specification, disclosing the essence of the nature of the invention. helps to register the priority of the invention.

Delay in filing an application may entail some risks such as:

- (i) some other inventor might file a patent application on the said invention and

- (ii) there may be either an inadvertent publication of the invention by the inventor himself/herself or by others independently of him/her.

9. Who can apply for a patent?

A patent application can be filed either by true and first inventor or his assignee, either alone or jointly with any other person. However, legal representative of any deceased person can also make an application for patent.

10. How can I apply for a patent?

A patent application can be filed with Indian Patent Office either with provisional specification or with complete specification along with fee as prescribed in schedule. In case the application is filed with provisional specification, then one has to file complete specification within 12 months from the date of filing of the provisional application. There is no further extension of time to file complete specification after expiry of said period.

11. Is there provision for filing patent application electronically by online system?

Yes, one can file patent applications through comprehensive online filing system at <https://ipindiaonline.gov.in/epatentfiling/goForLogin/doLogin>.

More information for filing online application is available on the website of Patent Office i.e., www.ipindia.gov.in.

12. How can one register for online filing of patent application?

To register for filing of patent application, the user is required to obtain the Class II/III digital signature. After obtaining the digital signature, the user can register himself on the CGPDTM website by creating his user ID and password.

Rights from Patents:

A **patent** owner has the **right** to decide who may – or may not – use the **patented** invention for the period in which the invention is protected.

In other words, **patent protection means that the invention cannot be commercially made, used, distributed, imported, or sold by others without the patent owner's consent.**

Can patent right be Transferred?

A **patent** is considered as a transferrable property that **can** be **transferred** from the original patentee to any other person by assignment or by operation of **law**. A **patent can** be licensed or assigned only by the owner of the **patent**.

Where do I get Patent rights?

The Indian **Patent** Office is administered by the Office of the Controller General of **Patents, Designs & Trade Marks (CGPDTM)**, a subordinate office of the Government of **India** which reports to Department of Industrial Policy and Promotion (DIPP) under the Ministry of Commerce and Industry which administers the **Patent**.

Infringement of Patents:

Patent infringement means the violation of the exclusive rights of the patent holder. ...

In other words,

if any person exercises the exclusive rights of the patent holder without the patent owner's authorization then that person is liable for patent infringement.

Civil courts have exclusive jurisdiction to hear and decide issues concerning patent infringement.

However, the **Patent** Office and the Intellectual Property Appellate Board (a specialized statutory body established to deal with intellectual property issues) have jurisdiction to decide on issues of **patent** invalidity.

Patent infringement is not a crime, so there are no **criminal** penalties. It is a civil matter, and one of the reasons why **patent infringement** is so common is because the **civil penalties are not severe**.

Way to **avoid infringement** is to “practice the prior art.” A **patent** claim that covers the prior art is invalid, so practicing the prior art will **prevent** interpreting a claim to be both valid and **infringed**.

How do I prove Patent infringement?

To **prove** direct **infringement**, the **patent** holder must **prove** that the defendant made, used, sold, offered for sale or imported the claimed invention. Direct **infringement** may occur literally, meaning that a claim of the **patent**, when compared to the accused device or process, is an exact match.

Copyright:

Copyright refers to the legal right of the owner of intellectual property.

In simpler terms,

copyright is the right to copy. This means that the original creators of products and anyone they give authorization to are the only ones with the exclusive right to reproduce the work.

Examples-books, poems, plays, songs, films, and artwork.

The penalties for copyright infringement are: For individuals – financial penalty up to \$117,000 and a possible term of imprisonment of up to five years.

The following types of works are allowed protection under the copyright law:

- Literary Works.
- Musical Works.
- Dramatic Works.
- Choreographic Works.
- Pictorial, Graphic, and Sculptural Works.
- Motion Pictures and Other Audiovisual Works.
- Sound Recordings.
- Compilations.

Ownership of Copyright:

The law grants to owners a set of specified rights: reproduction of works, distribution of copies making of derivative works, and the public performance and display of works.

Some artworks have "moral rights" regarding the name of the artist on the work, or preventing destruction of some works. Owners may also have rights to prevent anyone from circumventing technological protection systems that control access to the works.

Author is the copyright owner.

As a general rule, the initial owner of the copyright is the person who does the creative work. If you wrote the book or took the photograph, you are the copyright owner.

Employer may be the copyright owner:

If you created the work as an employee, acting within the scope of your employment, the work may be a "work made for hire." In that event, the copyright owner is the employer.

If you are an employee, and your job is to create software code, the copyright probably belongs to your employer.

Copyrights can be transferred.

The law may make you or your employer the copyright owner, but the law also allows the owner to transfer the copyright. With a written and signed instrument, your employer can give you the copyright.

In the academic setting, we are frequently asked to transfer copyrights in our books and articles to publishers. The ability to transfer or retain our copyrights is an opportunity to be good stewards of our intellectual works.

Infringement of Copyright:

Copyright infringement (colloquially referred to as **piracy**) is the use of works protected by copyright law without permission for a usage where such permission is required, thereby infringing certain exclusive rights granted to the copyright holder, such as the right to reproduce, distribute, display or perform the protected work, or to make derivative works.

The copyright holder is typically the work's creator, or a publisher or other business to whom copyright has been assigned. Copyright holders routinely invoke legal and technological measures to prevent and penalize copyright infringement.

OR

As a general matter, **copyright infringement** occurs when a **copyrighted** work is reproduced, distributed, performed, publicly displayed, or made into a derivative work without the permission of the **copyright** owner.

The legal penalties for copyright infringement are:

1. Infringer pays the actual dollar amount of damages and profits.
2. The law provides a range from \$200 to \$150,000 for each work infringed.
3. Infringer pays for all attorney's fees and court costs.
4. The Court can issue an injunction to stop the infringing acts.
5. The Court can impound the illegal works.
6. The infringer can go to jail.

There are many types and **forms of copyright infringement**. These are some examples of activities that would constitute copyright infringement if you carry them out without first obtaining permission from the owner, creator, or holder of the copyrighted material:

- Recording a film in a movie theater.
- Posting a video on your company's website which features copyrighted words or songs.
- Using copyrighted images on your company's website.
- Using a musical group's copyrighted songs on your company's website.
- Modifying an image and then displaying it on your company's website.
- Creating merchandise for sale which features copyrighted words or images.
- Downloading music or films without paying for their use.
- Copying any literary or artistic work without a license or written agreement.

Civil Remedies for Infringement:

A **civil remedy** refers to the **remedy** that a party has to pay to the victim of a wrong he commits. A **civil remedy** is generally separate from a criminal **remedy**, although in certain situations the **civil** and criminal **remedy** may be related.

There are three kinds of remedies against infringement of copyright, namely:

- **Civil remedies.** Injunction damages or account of profit, delivery of **infringing** copy and damages for conversion.
- **Criminal remedies.** Imprisonment of the accused or imposition of fine or both. ...
- **Administrative remedies.**

The minimum punishment for infringement of copyright is **imprisonment** for six months with the minimum **fine** of Rs. 50,000/-. In the case of a second and subsequent conviction the minimum punishment is **imprisonment** for one year and **fine** of Rs. one lakh.

Regulation to Information:

Introduction-

Democracy requires an informed citizenry and transparency of information which are vital to its functioning and also to contain corruption and to hold governments and their instrumentalities accountable to the governed, says the preamble of the Indian Right to Information (RTI) Act, 2005.

Information as a term has been derived from the Latin words “formation” and “forma” which means giving shape to something and forming a pattern respectively.

Information is needed by human beings to realize their full social, political and economic potential. It is the key which helps make decisions. It is also a public resource collected and stored by government in trust for people

The Right to Information Act, 2005 (RTI) is a Central Legislation to provide for setting out the particular regime of right to information for citizens.

The right to Information Bill, 2005 was passed by the Lok Sabha on May 11, 2005 and by the Rajya Sabha on May 12, 2005 and received the assent of the President of India on June 15, 2005 and came to force on October 12, 2005. It has replaced the **Freedom of Information Act, 2002**.

This act is applicable throughout India.

This law is very comprehensive and covers almost all matters of governance and has the widest possible reach, being applicable to Government at all levels- Union, State and Local.

The Right to Information Act is in accord with Article 19 of the Constitution of India, which enables Indians to exercise their fundamental Right of Speech, Expression and as often interpreted by the Supreme Court the inalienable Right to receive and impart Information. Currently, the RTI Act in India is passing through a decisive phase, much more needs to be done to facilitate its growth and development.

Objectives of RTI-

Good governance has four elements- transparency, accountability, predictability and participation and RTI helps in achieving the same.

Right to Information is just like oxygen for democracy. It stands for transparency.

Information would lead to openness, accountability and integrity. Besides, apart from ensuring greater transparency it also acts as a deterrent against the arbitrary exercise of public powers. A culture of individual action, political consciousness and public spirit is the basis for the success of democracy.

Open Government is the new democratic culture of an open society towards which every liberal democracy is moving, and our country should be no exception. In a country like India which is committed to socialistic pattern of society, right to know becomes a necessity for the poor, ignorant and illiterate masses.

Objective of the Act is to establish the practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, the constitution of a Central Information Commission and State Information Commission and for matters connected therewith and incidental thereto.

Greater Accountability: One of the brilliant features of RTI is that it makes public authorities answerable to the general public, which strengthen the participatory democracy. Every public authorities is required to provide reasons for its administrative and quasi-judicial decisions to the affected persons u/s 4(1)(d) of the Act, and hence the possibility of arbitrariness reduce to the great extent.

The worldwide accepted indicators of good governance over the period of time are:

- Voice and accountability
- Political stability and absence of violence
- Government effectiveness
- Regulatory quality

- Rule of law
- Control of corruption

Greater Transparency: Rights which are provided in various sections of the Act certainly facilitates the greater transparency in work of public authorities. For instance, under section 2(j), of the Act, a citizen has the right to:

- Inspection of work, documents, records
- Taking notes extracts or certified copies of the documents or records
- Taking certified sample of material, and
- Obtaining information in electronic form, if available
- Under section 4(1)(d) of the Act, a public authority is required to provide reasons for its administrative or quasi-judicial decision to the affected persons.

The commission u/s 20(1) has power to impose penalties or to recommend disciplinary action against the information providers, if held for being stone in path of the free flow of information. In other words, intention of the framers of this Act is that there should not be any bottle neck in the process of free flow of information to the citizens. The citizens are thus better informed about the performance and contributions of the elected representatives, which augurs well for a healthy democracy and democratic governance of projects.

Right to Information: A Global View

Over 50 countries now have freedom of information laws and another 15-20 are actively considering adopting one. These nations are joined by a growing number of inter-Governmental bodies including the World Bank, European Union and UNDP that have established FOI policies. It provides that all citizens enjoy rights of freedom of opinion and expression, including the right to seek, receive, and impart information and ideas, a guarantee now generally considered to include an obligation of openness on the part of Government.

Right to Information Act, 2005:

Important Features of Right to Information Act, 2005

- All citizens possess the right to information
- The term Information includes any mode of information in any form of record, document, e-mail, circular, press release, contract sample or electronic data etc.
- Rights to information covers inspection of work, document, record and its certified copy and information in form of diskettes, floppies, tapes, video cassettes in any electronic mode or stored information in computer etc.
- Applicant can obtain Information within 30 days from the date of request in a normal case
- Information can be obtained within 48 hours from time of request. If it is a matter of life or liberty of a person.
- Every public authority is under obligation to provide information on written request or request by electronic means.
- Certain information is prohibited. Restrictions made for third party information Appeal against the decision of the Central Information Commission or State Information Commission can be made to an officer who is senior in rank.
- Penalty for refusal to receive an application for information or for not providing information is Rs. 250/- per day but the total amount of penalty should not exceed Rs. 25,000/-.
- Central Information Commission and State Information Commission are to be constituted by the Central Government and the respective State Governments.
- No Court can entertain any suit, application or other proceedings in respect of any order made under the Act.

Provisions of IT Act 2000:

The IT Act of 2000 passed in a budget session of parliament and signed by President K.R. Narayanan in 2000. It underwent further finalization by India's Minister of Information Technology, Pramod Mahajan.

The original act addressed electronic documents, e-signatures, and authentication of those records. It also enacted penalties for security breach offenses including damaging computer

systems or committing cyber terrorism. Regulating authorities received power to monitor these situations and draft rules as situations arose.

The IT Act underwent changes as Internet technology grew. In 2008, additions expanded the definition of "**communication device**" to include mobile devices and placed owners of given IP addresses responsible for distributed and accessed content.

Privacy was addressed in 2011 when stringent requirements for collecting personal information came into effect.

The most **controversial change** in this act involves section 66A. It makes "offensive messages" illegal and holds the owners of servers responsible for the content.

That means if an IP address with pornographic images is traced to your servers, you can be held liable for it even if you did not authorize its access.

Penalties range from imprisonment of **three years to life and fines**. Offenses that occur in a corporate setting can result in further administrative penalties and bureaucratic monitoring that can prove burdensome to doing business.

Requirements of IT Act 2000-

The IT Act 2000 applies to companies that do business in India. This includes entities registered in India, outsource there, and maintain servers within the country's borders.

The act covers all activity involving online exchanges and electronic documents.

If your only connection with India is having customers there, **you are not held to the IT Act.**

The only way that can occur is if you run a service or sell a product and also maintain servers there.

For example, **Instagram is popular in India with many people participating in that social media app.** However, Instagram is a U.S. company and does not need policies complying with the IT Act.

However, Snapdeal, an online shopping source in India, is an Indian company that conducts transactions in India. It is held to the stipulations in the IT Act 2 - and that is addressed in its Privacy Policy page:

<https://www.termsfeed.com/public/uploads/2016/11/snapdeal-privacy-policy-it-act-2000-reference.jpg>

Compliance checklist for IT Act 2000

Complying with the IT Act and the privacy requirements that follow **will be a large effort.**

In the end, you will have a more secure system that consumers can use in confidence. These steps will help you meet the requirements of the law in the most efficient way possible.

Know the location of your servers:

India's IT Act can be a difficult law to follow. It is also one of the few Internet protection and privacy laws that puts responsibility for content on intermediaries, meaning the companies that own the server.

If your company is located in India and registered there, there is no doubt that you must comply with the act. The same is true if your company is a foreign entity that outsourced to India or maintains servers in India.

Multiple layers of outsourcing can lead to unknown server locations. If you hired a consultant or other company to handle your outsourcing or IT needs, ask them where they keep the servers.

Even if your company is not technically an Indian company, you can still fall under this law if your servers are in India - even if you did not know that was the case.

Follow Privacy by Design:

Many offenses listed in this act arise from security breaches.

Look into the Privacy by Design guidelines to not only have a tight Privacy Policy but also the IT security to back it up.

Limit access to your servers and create unique login credentials. Also, develop ways to track use on your servers so if any illegal activity arises, you can link it to an individual rather than make it appear your entire company is culpable.



A good example of this implementation is BillDesk, a payment processing company. Located in Mumbai, its primary service is to assist with bill payments. It maintains many pages on privacy as well as a Privacy Policy page.

It also offers a security explanation to show customers how payments are protected. As you can see, it describes its own Privacy by Design approach in detail with links to relevant sections:

<https://www.termsfeed.com/public/uploads/2016/11/billdesk-privacy-policy-security-practices.jpg>

New privacy protection additions passed in 2011 require written permission from users before a company can use personal information. These have been considered burdensome by many companies, although there is also an argument that they provide assurance.

It appears that most companies work in automatic acceptance of privacy rules in their Privacy Policies.

Electronic Governance:

E-governance or Electronic Governance is dealt with under Sections 4 to 10A of the IT Act, 2000. It provides for legal recognition of electronic records and Electronic signature and also provides for legal recognition of contracts formed through electronic means.

Filing of any form, application or other documents, creation, retention or preservation of records, issue or grant of any license or permit or receipt or payment in Government offices and its agencies may be done through the means of an electronic form.

Authorisation by Government-

The Government may authorize any service provider to set up, maintain and upgrade the computerized facilities and perform such other services as it may specify, by notification in the Official Gazette for efficient delivery of services to the public through electronic means.

Service provider so authorized includes any individual, private agency, a private company, partnership firm, sole proprietor form or any such other body or agency which has been granted permission by the appropriate Government to offer services through electronic means in accordance with the policy governing such service sector.

Data Retention-

In case law provides that documents, records or information should be retained for any specific period, then such documents, records or information retained in the electronic form will also be covered, if the information contained therein remains accessible.

The electronic record is retained in the format in which it was originally generated, sent or received or in a format which can be demonstrated to represent accurately the information originally generated, sent or received and the details which will facilitate the identification of the

origin, destination, date and time of dispatch or receipt of such electronic record are available in the electronic record.

The following are some of the e-Governance applications already using the Digital Signatures:-

- Income Tax e-filing
- Indian Railway Catering and Tourism Corporation (IRCTC)
- Director-General of Foreign Trade (DGFT)
- RBI Applications (SFMS: structured Financial Messaging System)
- National E-Governance Services Delivery Gateway (NSDG)
- E-Procurement

The main objective of e-Governance:

The strategic **objective of e-governance is to support and simplify governance for all parties - government, citizens and businesses.** The use of ICTs can connect all three parties and support processes and activities. In other words, **in e-governance uses electronic means to support and stimulate good governance.**

Benefits of e-governance-

The anticipated benefits of e-government include **efficiency, improved services, better accessibility of public services, sustainable community development and more transparency and accountability.**

Types of E-Governance-

E-Governance is of 4 types depending on the specific types of services.

- Government-to-Citizen(G2C) The Government-to-citizen refers to the government services that are accessed by the familiar people. ...
- Government-to-business (G2B) ...
- Government-to-Government (G2G) ...
- Government-to-Employee (G2E)

Advantages of E-Governance-

- **Speed**

Technology makes communication swifter. Internet, smartphones have enables instant transmission of high volumes of data all over the world.

- **Saving Costs**

A lot the Government expenditure goes towards the cost of buying stationery for official purposes. Letters and written records consume a lot of stationery. However, replacing them with smartphones and the internet can saves crores of money in expenses every year.

- **Transparency**

The use of e-governance helps make all functions of the business transparent. All Governmental information can be uploaded onto the internet. The citizens access specifically access whichever information they want, whenever they want it, at the click of a mouse, or the touch of a finger.

However, for this to work the Government has to ensure that all data as to be made public and uploaded to the Government information forums on the internet.

- **Accountability**

Transparency directly links to accountability. Once the functions of the government are available, we can hold them accountable for their actions.

Disadvantages of E-Governance-

- **Loss of Interpersonal Communication**

The main disadvantage of e-governance is the loss of interpersonal communication. Interpersonal communication is an aspect of communication that many people consider vital.

- **High Setup Cost and Technical Difficulties**

Technology has its disadvantages as well. Specifically, the setup cost is very high and the machines have to be regularly maintained. Often, computers and internet can also break down and put a dent in governmental work and services.

- **Illiteracy**

A large number of people in India are illiterate and do not know how to operate computers and smartphones. E-governance is very difficult for them to access and understand.

- **Cybercrime/Leakage of Personal Information**

There is always the risk of private data of citizens stored in government servers being stolen. Cybercrime is a serious issue a breach of data can make the public lose confidence in the Government's ability to govern the people.

Why do we need e-governance?

It ensures citizen participation at all levels of **governance**. It leads to automated services so that all works of public welfare is available to all citizens. It revolutionizes the functions of the **government** and ensures transparency. It provides better services to citizens and brings **government** close to public.

Examples of e-governance-includes

- Digital India initiative,
- National Portal of India,
- Prime Minister of India portal,
- Aadhar,
- filing and payment of taxes online,
- digital land management systems,
- Common Entrance Test etc.

Difference between e-government and e-governance-

By **e-Government** we mean the use of ICT in **government** operations, as a tool to increase the outreach of the **government** services to the general public.

e-Governance, on the other hand, implies the use of ICT in transforming and supporting functions and structures of the system.

Secure Electronic Records and Secure Digital Signatures:

- **Secure electronic record-**

Where any security procedure has been applied to an electronic record at a specific point of time. then such record shall be deemed to be a secure electronic record from such point of time to the time of verification.

➤ **Secure digital signature-**

If, by application of a security procedure agreed to by the parties concerned, it can be verified that a digital signature, at the time it was affixed, was-

- unique to the subscriber affixing it.
- capable of identifying such subscriber.

created in a manner or using a means under the exclusive control of the subscriber and is linked to the electronic record to which it relates in such a manner that if the electronic record was altered the digital signature would be invalidated then such digital signature shall be deemed to be a secure digital signature.

Digital Signature:

- According to **section 2(1)(p)** of the Information Technology Act, 2000 **digital signature means the authentication of any electronic record by a person who has subscribed for the digital signature in accordance to the procedure mentioned under section 3 of the same act.**
- **Section 5** of the Information Technology Act, 2000 gives legal recognition to digital signatures.

Usage of Digital Signature:

1) **Personal Use-** It is at the liberty of the individual to use the signature personally without creating the hassle to personally be at the given place.

2) **Business-** Professions such as Architecture, Construction and Engineering Companies require to sign the tenders, market procurements or even biddings, Digital signature can prove to be a great way to provide the assent.

3) **Return filing for GST-** GST filing and E-filing causes the individuals to compulsory opt for Digital Signatures.

4) **Filing for Income Tax-** Some corporations require the business to file the tax all over India, thus saving the light of the day.

Features of Digital Signature-

- ### ➤ **The authenticity of the sender**

The person who receives the electronic message or document is able to realize who is the sender of the message. The digital signature makes it possible to verify the name of the person signing the message digitally.

➤ **The integrity of the message**

The receiver of the electronic message is able to determine whether he/she has received the original document or whether the document has been altered before the receipt or not.

➤ **Non- Repudiation**

The sender of the message cannot refute the contents of the electronic message and cannot deny that he/she had never sent the message.

Authentication using Digital Signature-

The authentication of the electronic record is done by creating a digital signature which is a mathematical function of the message content. Such signatures are created and verified by Cryptography, which is a branch of applied mathematics. It is used to secure the confidentiality and authentication of the data by replacing it with a transformed version that can be reconverted to reveal the original data only to someone who has the proper key.

- A key is a sequence of symbols that controls the operation of a cryptographic transformation.
- It involves two processes which are as follows.
 1. **Encryption:** The process of transforming the plain message into a cipher text.
 2. **Decryption:** The reversal of Cipher text into the original message.

Benefits of Digital Signature-

- Authenticity.
- Non-Deviability.
- Message cannot be altered in between the transmission.

Digital Signature Certificate (DSC)-

Introduction

1. A method to prove the authenticity of an electronic document.

2. It can be presented electronically to prove the identity, to access information or sign certain documents digitally.
3. The Central Government has appointed a Controller of Certifying Authorities who grants a license to the Certifying Authorities to issue digital signature certificates to the subscriber.

Who needs a DSC?

1. A vendor and a bidder.
2. A Chartered Accountant.
3. Banks.
4. Director of a company.
5. A Company Secretary.
6. Other Authorized Signatories.

Elements of Digital Certificate-

1. Owner's public key.
2. Owners name.
3. The expiration date of Public Key.
4. Name of the issuer.
5. Serial Number of the certificate.
6. A digital signature of the user.

Types of Certificate

1. **Only Sign**– It could only be used for signing a document. It is widely used in signing PDF Files for the purpose of filing Tax Returns for usage as an attachment for Ministry of Corporate Affairs or other government websites
2. **Encrypt**– It is used to encrypt a particular document. It is popularly used in tender portals to help a company encrypt a document before uploading it.
3. **Sign along with Encryption**– It is used for both signing and encrypting a particular document.

Validity-

The DSC is valid up to a maximum period of **three years**.

DSC under the Information Technology Act, 2000

- **Section 35:** Any person who wishes to get a Digital Signature Certificate may file an application to the certifying authority for issuance of the Electronic Certificate along with the submission of the required amount of fees not exceeding Rs. 25,000, including a statement of certification practice or stating such particulars as prescribed.
- **Section 36:** Representations upon issuance of the DSC.
- **Section 37:** Suspension in public interest, not more than 15 days, unless given the opportunity to present the case.
- **Section 38:** Revocation on death or request of a subscriber, dissolution of a company or a firm.

Cyber Regulations Appellate Tribunal:

The Information Technology Act, 2000 also provides for the establishment of the Cyber Appellate Tribunal.

Establishment of Cyber Appellate Tribunal (Section 48)

1. The Central Government notifies and establishes appellate tribunals called Cyber Regulations Appellate Tribunal.
2. The Central Government also specifies in the notification all the matters and places which fall under the jurisdiction of the Tribunal.

The composition of Cyber Appellant Tribunal (Section 49)

The Central Government appoints only one person in a Tribunal – the Presiding Officer of the Cyber Appellate Tribunal.

The qualifications for appointment as Presiding Officer of the Cyber Appellate Tribunal (Section 50)

A person is considered qualified for the appointment as the Presiding Officer of a Tribunal if –

- a. He has the qualification of the Judge of a High Court
- b. He is or was the member of the Indian Legal Service and holds or has held a post in Grade I of that service for at least three years.

The Term of Office (Section 51)

The Term of Office of the Presiding Officer of a Cyber Appellate Tribunal is five years from the date of entering the office or until he attains the age of 65 years, whichever is earlier.

Filling up of vacancies (Section 53)

If for any reason other than temporary absence, there is a vacancy in the Tribunal, then the Central Government hires another person in accordance with the Act to fill the vacancy. Further, the proceedings continue before the Tribunal from the stage at which the vacancy is filled.

Resignation and removal (Section 54)

1. The Presiding Officer can resign from his office after submitting a notice in writing to the Central Government, provided:
 - a. he holds office until the expiry of three months from the date the Central Government receives such notice (unless the Government permits him to relinquish his office sooner), OR
 - b. he holds office till the appointment of a successor, OR
 - c. until the expiry of his office; whichever is earlier.
2. In case of proven misbehavior or incapacity, the Central Government can pass an order to remove the Presiding Officer of the Cyber Appellate Tribunal. However, this is only after the Judge of the Supreme Court conducts an inquiry where the Presiding Officer is aware of the charges against him and has a reasonable opportunity to defend himself.
3. The Central Government can regulate the procedure for the investigation of misbehavior or incapacity of the Presiding Officer.

List the provisions in the IT Act, 2000 for the Cyber Appellate Tribunal-

The provisions are as follows:

- Establishment of Cyber Appellate Tribunal (Section 48)
- The composition of Cyber Appellate Tribunal (Section 49)
- The qualifications for appointment as Presiding Officer of the Cyber Appellate Tribunal (Section 50)
- The Term of Office (Section 51)
- Filling up of vacancies (Section 53)

- Resignation and removal (Section 54)
- Orders constituting Appellate Tribunal to be final and not to invalidate its proceedings (Section 55)
- Appeal to Cyber Appellate Tribunal (Section 57)
- Procedure and powers of the Cyber Appellate Tribunal (Section 58)
- Right to Legal Representation (Section 59)
- Limitation (Section 60)
- Civil Court not to have jurisdiction (Section 61)
- Appeal to High Court (Section 62)
- Compounding of contraventions (Section 63)
- Recovery of Penalty (Section 64)