INTELLECTUAL PROPERTY RIGHTS AND PATENTS

UNIT – I Definitions and importance of intellectual property – Introduction and history of WTO – Structure of WTO agreements and dispute settlements – Principles of trading system – Trade policy reviews – Agreement on TRIPS – Ministerial conferences – Emerging issues in IPR – Protection of plant varieties – Patent sharks – Open-source movement – Bio-piracy

1.1 **Definitions and importance of intellectual property :**

Definition of Intellectual Property :

According to WIPO

Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.

Intellectual property (IP) contributes enormously to our national and state economies. Dozens of industries across our economy rely on the adequate enforcement of their patents, trademarks, and copyrights, while consumers use IP to ensure they are purchasing safe, guaranteed products. We believe IP rights are worth protecting, both domestically and abroad. This is why:

Importance of Intellectual Property

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

IP-intensive industries employ hundreds of millions of people worldwide.

Jobs in IP-intensive industries are expected to grow faster over the next decade than the national average.

The average worker in an IP-intensive industry earned about 46% more than his counterpart in a non-IP industry. Eg; TCS in India

- **Drives Economic Growth and Competitiveness**

The nation's economy and GDP is determined through Intellectual Property. America GDP is highest in the world because of its Intellectual Property. The Intellectual property leads to economic growth and employment.

- **Protect Consumers and Families**

Strong IP rights help consumers make an educated choice about the safety, reliability, and effectiveness of their purchases.

Enforced IP rights ensure products are authentic, and of the high-quality that consumers recognize and expect.

IP rights foster the confidence and ease of mind that consumers demand and markets rely on.

- **Generate Solutions to Global Challenges**

Nearly all of the hundreds of products on the World Health Organization's Essential Drug List, which are critical to saving or improving people's lives around the globe, came from the R&D-intensive pharmaceutical industry that depends on patent protections.

Innovative agricultural companies are creating new products to help farmers produce more and better products for the world's hungry while reducing the environmental impact of agriculture.

IP-driven discoveries in alternative energy and green technologies will help improve energy security and address climate change.

- **Encourage Innovation and Reward Entrepreneurs**

Risk and occasional failure are the lifeblood of the innovation economy. IP rights incentivize entrepreneurs to keep pushing for new advances in the face of negative outcomes.

IP rights facilitate the free flow of information by sharing the protected know-how critical to the original, patented invention. In turn, this process leads to new innovations and improvements on existing ones.

American's Founding Fathers so recognized the importance of innovation and ensured that strong IP rights for authors and inventors are protected in the U.S. Constitution, thus making America the world's entrepreneurial leader— a fact borne out by the overwhelming number of patents, copyrights and trademarks filed by the U.S. annually.

1.2 Introduction and history of WTO

The World Trade Organization (WTO) is the global international organization dealing with the rules of trade between nations. WTO agreements are negotiated and signed by countries which are members of WTO. The goal is to help producers of goods and services, exporters, and importers conduct their business.

Evolution and History of WTO :

1. Trade Agreement:

In 1934, the United States passed the Reciprocal Trade Agreements Act of 1934 for promoting and regulating international commerce. Bilateral trade agreements. (Bilateral agreements are those between two parties — for example, the US and another country.) were negotiated In the hopes of expanding employment . During the 1930s, the amount of bilateral negotiation under this act was fairly limited,

2. Estabilishment of ITO :

In the 1940s, working with the British government, the United States developed ITO (International Trade Organization). The **International Trade Organization** (**ITO**) was the proposed name for an international institution for the regulation of trade.

Led by the United States in collaboration with allies, the effort to form the organization from 1945 to 1948, with the successful passing of the Havana Charter, eventually failed due to lack of approval by the US Congress.

3. GATT

The General Agreement on Tariffs and Trade (GATT), signed in 1947 by 23 countries, is a treaty minimizing barriers to international trade by eliminating or reducing quotas, tariffs, and subsidies. It was intended to boost economic recovery after World War II

4. The Establishment of the WTO after Uruguay Round:

By the late 1980s, a growing number of nations decided that GATT could better serve global trade expansion if it became a formal international organization. An effective dispute settlement mechanism was the need of the hour. They pressed for negotiations to formalize GATT and to make it a more powerful and comprehensive organization. The result was the World Trade Organization, (WTO), which was established during the Uruguay Round (1986-1993) of GATT negotiations and which subsumed GATT. The WTO began life on 1 January 1995 .The WTO provides a permanent arena for member governments to address international trade issues and it oversees the implementation of the trade agreements negotiated in the Uruguay Round of trade talks.

Objectives and functions of World Trade Organisation (WTO)

The objectives of World Trade Organisation (WTO) are:

1. Creating and Enforcing International Trade Regulations:

The General Agreement on Trade in Services, the Trade-Related Aspects of Intellectual Property Rights Agreement, and the Agreement on International Trade in Goods, all serve as the foundation for the World rade Organization (WTO).
The WTO uses a multilateral dispute settlement system to enforce its rules when one of its member countries violates a trade agreement. The methods and decisions must be respected and adhered to by the members through signed agreements.

2. Making the Decision Making Process More Transparent:

The WTO has made an effort to promote transparency in decision-making by encouraging participation and, in particular, the use of the consensus rule. Such measures work together to increase institutional transparency.

3. Collaboration between International Economic Institutions:

The onset of globalization has made strong collaboration amongst multilateral institutions necessary. The World Trade Organization, the International Monetary Fund, the United Nations Conference on Trade and Development, and the World Bank are some international economic institutions These institutions help develop and carry out a framework for international economic policy. Policy making may be disturbed in the absence of regular cooperation and mutual participation.

4. Serving as the World's Leading Forum:

The WTO is the international platform for regulating and negotiating additional trade liberalization. The foundation of WTO liberalization initiatives is based on members' benefits to make the best use of their comparative advantages as a result of a free and fair trade system.

5. Settlements of Trade Disputes:

Before the WTO, trade disputes usually arise from the breach of agreements between the member nations. Such trade disputes are settled through a multilateral system with predetermined rules and regulations.

6. Others:

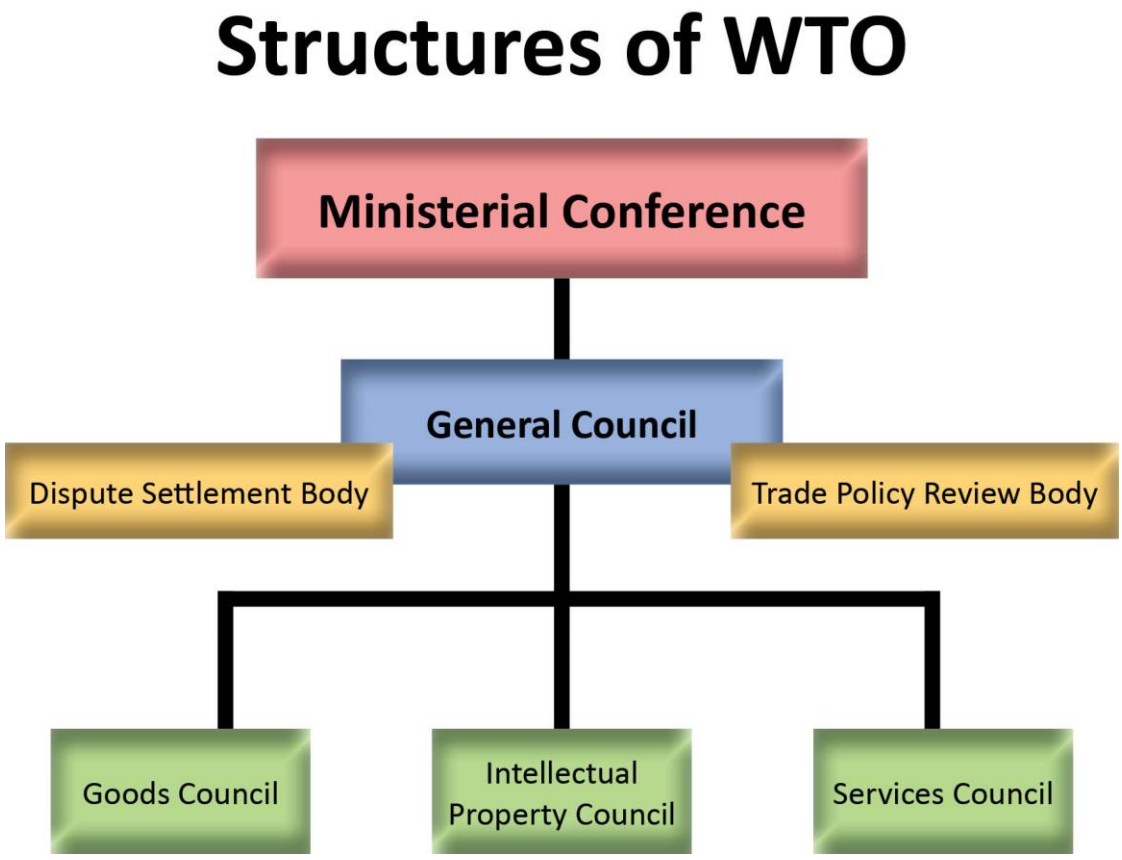
Some of the other objectives of the World Trade Organisation are as follows:

- To ensure optimum utilization of world resources.
- To protect the environment.
- To ensure full employment and a significant rise in effective demand.
- To raise the level of standard of living for citizens of member nations.
- To embrace the idea of sustainable development.

1.3 : Structure of WTO and its Agreements

- Structure of WTO

  The WTO is run by its member governments. All major decisions are made by the membership as a whole, either by ministers (who meet at least once every two years) or by their ambassadors or delegates (who meet regularly in Geneva). Decisions are normally taken by consensus.



- Highest authority: the Ministerial Conference So, the WTO belongs to its members. The countries make their decisions through various councils and committees, whose membership consists of all WTO members. Topmost is the ministerial conference which

has to meet at least once every two years. The Ministerial Conference can take decisions on all matters under any of the multilateral trade agreement

- Second level: General Council Day-to-day work in between the ministerial conferences is handled by three bodies:
  • The General Council
  • The Dispute Settlement Body
  • The Trade Policy Review Body
  All three are in fact the same — the Agreement Establishing the WTO states they are all the General Council, although they meet under different terms of reference. Again, all three consist of all WTO members. They report to the Ministerial Conference. The General Council acts on behalf of the Ministerial Conference on all WTO affairs. It meets as the Dispute Settlement Body and the Trade Policy Review Body to oversee procedures for settling disputes between members and to analyze members' trade policies.
- Third level: Three more councils, each handling a different broad area of trade, report to the General Council:
  • The Council for Trade in Goods (Goods Council)
  • The Council for Trade in Services (Services Council)
  • The Council for Trade-Related Aspects of Intellectual Property Rights (TRIPS Council) As their names indicate, the three are responsible for the workings of the WTO agreements dealing with their respective areas of trade. Again they consist of all WTO members. . They cover issues such as trade and development, the environment, regional trading arrangements, and administrative issues.

Agreement under WTO;

1.4 **The Dispute Settlement Body (DSB)**

The composition:
The General Council of WTO discharges its responsibilities under the Dispute Settlement Body. DSB is composed of representatives of all WTO Members.
These are governmental representatives, in most cases diplomatic delegates who reside in Geneva (where the WTO is based) and who belong to either the trade or the foreign affairs ministry of the WTO Member they represent. As civil servants, they receive instructions from their capitals on the positions to take and the statements to make in the DSB. As such, the DSB is a political body.

Functions of DSB:

The DSB is responsible for overseeing the entire dispute settlement process.
Establish panels: .
The DSB has the authority to establish panels, adopt panel and Appellate Body. The panel has to prepare reports and implement the rules and regulations with regard to dispute settlement.

Conduct meeting:

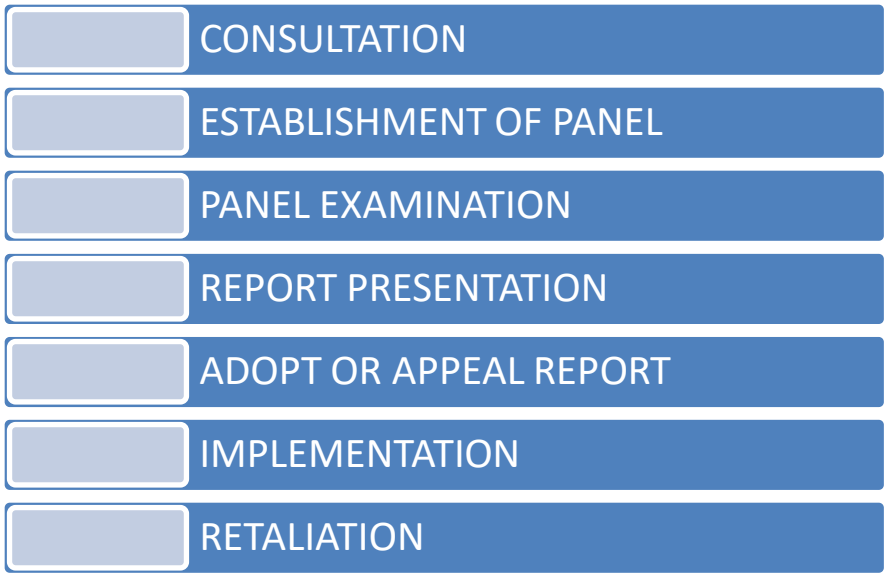
DSB usually has one regular meeting per month. When a Member so requests, the Director-General convenes additional special meetings. The staff of the WTO Secretariat provides administrative support for the DSB

Adjudication and decision by consensus:
In case of disputes, DSB is responsible for the referral of a dispute to adjudication (establishing a panel); for making the adjudicative decision binding (adopting the reports); generally, for supervising the implementation of the ruling; and for authorizing "retaliation" when a Member does not comply with the ruling.
Consensus decision: The general rule is for the DSB to take decisions by consensus. DSU defines consensus as being achieved if no WTO Member, present at the meeting when the decision is taken, formally objects to the proposed decision. This means that the chairperson does not actively ask every delegation whether it supports the proposed decision, nor is there a vote. On the contrary, the chairperson merely asks, for example, whether the decision can be adopted and if no one raises their voice in opposition, it is consensus.
the chairperson will announce that the decision has been taken or adopted. In other words, a delegation wishing to block a decision is obliged to be present and alert at the meeting, and when the moment comes, it must raise its flag and voice opposition. Any Member that does so, even alone, is able to prevent the decision.
Ensure full participation:
No Member (including the affected or interested parties) is excluded from participation in the decision-making process. This means that the Member requesting the establishment of a panel, the adoption of the report

Stages in a typical WTO dispute settlement case

A dispute can pass in the (WTO) dispute settlement system. There are two main ways to settle a dispute once a complaint has been filed in the WTO: (i) the parties find a mutually agreed solution, particularly during the phase of bilateral consultations; and (ii) through adjudication, including the subsequent implementation of the panel and Appellate Body reports, which are binding upon the parties once adopted by the DSB. There are three main stages to the WTO dispute settlement process:

1. consultations between the parties;
2. adjudication by panels and, if applicable, by the Appellate Body; and
3. the implementation of the ruling, which includes the possibility of countermeasures in the event of failure by the losing party to implement the ruling.



1.5 **Principles of trading system –**

The multilateral trading system of WTO follows certain principles

a. Trade without discrimination

1. Most-favoured-nation (MFN): treating other people equally Under the WTO agreements, countries cannot normally discriminate between their trading partners. Grant someone a special favour (such as a lower customs duty rate for one of their products) and you have to do the same for all other WTO members.

2. National treatment: Treating foreigners and locals equally Imported and locally-produced goods should be treated equally — at least after the foreign goods have entered the market. The same should apply to foreign and domestic services, and to foreign and local trademarks, copyrights and patents. This principle of "national treatment" (giving others the same treatment as one's own nationals) is also found in all the three main WTO agreements

Freer trade: gradually, through negotiation

Lowering trade barriers is one of the most obvious means of encouraging trade. The barriers concerned include customs duties (or tariffs) and measures such as import bans or quotas that restrict quantities selectively. From time to time other issues such as red tape and exchange rate policies have also been discussed.

Predictability: through binding and transparency

Sometimes, promising not to raise a trade barrier can be as important as lowering one, because the promise gives businesses a clearer view of their future opportunities. With stability and

predictability, investment is encouraged, jobs are created and consumers can fully enjoy the benefits of competition — choice and lower prices. The multilateral trading system is an attempt by governments to make the business environment stable and predictable.

Promoting fair competition

The WTO is sometimes described as a "free trade" institution, but that is not entirely accurate. The system does allow tariffs and, in limited circumstances, other forms of protection. More accurately, it is a system of rules dedicated to open, fair and undistorted competition.
The rules on non-discrimination — MFN and national treatment — are designed to secure fair conditions of trade. So too are those on dumping (exporting at below cost to gain market share) and subsidies. The issues are complex, and the rules try to establish what is fair or unfair, and how governments can respond, in particular by charging additional import duties calculated to compensate for damage caused by unfair trade.

Encouraging development and economic reform

The WTO system contributes to development. On the other hand, developing countries need flexibility in the time they take to implement the system's agreements. And the agreements themselves inherit the earlier provisions of GATT that allow for special assistance and trade concessions for developing countries.
Over three quarters of WTO members are developing countries and countries in transition to market economies. During the seven and a half years of the
The trading system should be ...

- without discrimination — a country should not discriminate between its trading partners (giving them equally "most-favoured-nation" or MFN status); and it should not discriminate between its own and foreign products, services or nationals (giving them "national treatment");
- freer — barriers coming down through negotiation;
- predictable — foreign companies, investors and governments should be confident that trade barriers (including tariffs and non-tariff barriers) should not be raised arbitrarily; tariff rates and market-opening commitments are "bound" in the WTO;
- more competitive — discouraging "unfair" practices such as export subsidies and dumping products at below cost to gain market share;
- more beneficial for less developed countries — giving them more time to adjust, greater flexibility, and special privileges.

1.6 Trade policy reviews

Trade Policy Review Mechanism

- The **Trade Policy Review Mechanism (TPRM)** was an early result of the **Uruguay Round.**

- It is the **main transparency instrument of the WTO,** affording opportunities for a process of collective evaluation of the trade policies and practices of individual members.
- **Objectives:**

- Facilitating the smooth functioning of the multilateral trading system by enhancing the transparency of Members' trade policies.
- To examine the impact of a Member's trade policies and practices on the multilateral trading system.
- **Mechanism:**

- The reviews **take place in the Trade Policy Review Body** which is actually the WTO General Council — comprising the WTO's full membership — operating under special rules and procedures.
- **Function:**

- The trade policy review **allows members to put the overall trade and economic policies of a country under the scanner.**
- The trade policies of developing countries are taken up for review every four years while developed ones face similar scrutiny every two years.
- The mandate of the TPRM was **broadened to cover services trade and intellectual property.**
- **All WTO Members are subject to review** under the TPRM.

The final session of India's seventh **Trade Policy Review (TPR)** concluded at the **World Trade Organization (WTO)** in Geneva, Switzerland during 2021.
Key Points

- **Appreciation for India:**

1. Introduction of **Goods & Services Tax**
2. India's efforts in the implementation of **WTO's Trade Facilitation Agreement.**
3. India's improved ranking in **"Trading across Borders"** indicator under the **Ease of Doing Business Report.**
   India's **National Intellectual Property Rights Policy, 2016.**

- **Concerns for India:**

1. India's trade **policy remained largely unchanged** since the previous review.
2. India continues to **rely on trade policy instruments** such as the **tariff, export taxes, minimum import prices, import and export restrictions, and licensing,** WTO said.

1.7 Agreement on TRIPS

Overview: the TRIPS Agreement
The TRIPS Agreement, which came into effect on 1 January 1995, is to date the most comprehensive multilateral agreement on intellectual property.
INTELLECTUAL PROPERTY RIGHTS Introduction Intellectual property (IP) is a term referring to creation of the intellect (the term used in studies of the human mind) for which a monopoly (from greek word monos means single polein to sell) is assigned to designated owners

by law. Some common types of intellectual property rights (IPR), in some foreign countries intellectual property rights is referred to as industrial property, copyright, patent and trademarks, trade secrets all these cover music, literature and other artistic works, discoveries and inventions and words, phrases, symbols and designs. Intellectual Property Rights are themselves a form of property called intangible property. .

The three main features of the Agreement are:

- **Standards.** In respect of each of the main areas of intellectual property covered by the TRIPS Agreement, the Agreement sets out the minimum standards of protection to be provided by each Member. Each of the main elements of protection is defined, namely the subject-matter to be protected, the rights to be conferred and permissible exceptions to those rights, and the minimum duration of protection.
- **Enforcement**. The second main set of provisions deals with domestic procedures and remedies for the enforcement of intellectual property rights. The Agreement lays down certain general principles applicable to all IPR enforcement procedures
- **Dispute settlement**. The Agreement makes disputes between WTO Members about the respect of the TRIPS obligations subject to the WTO's dispute settlement procedures.

Scope of TRIPS agreement/ Types of Intellectual Property:

a. Copyrights and related rights

The Agreement states that copyright protection only applies to phrases, ideas, techniques, operating methods, or mathematical concepts. Literary, musical, dramatic, photographic, sculptural, architectural, choreography, graphic, motion picture, sound recording, multimedia work, computer programs, and other works are all given copyright. For a certain amount of time, the owner of a copyright has the right to prevent others from duplicating, distributing, making derivative works, performing, exhibiting, or utilising the work covered by the copyright. The essence of copyright is originality, which means that the work was created by the copyright owner or claimant. A work of originality, on the other hand, does not have to be innovative. In copyright law, originality does not entail innovation.

b.Trademarks

Trademark is any sign, or set of signs, able to distinguish one undertaking's products and services from other undertakings', shall be eligible for trademark registration, provided that it is clearly detectable. Such signs, in particular words, characters, digits, figurative components, and colour combinations, as well as any combination of these signs, must be acceptable for trademark registration. The trademark owner has the exclusive right to restrict third parties from using similar or identical signs for products or services that are similar to those for which the trademark is registered.

c.Geographical indications

Geographical indications designate a good as coming from a member's territory, or an area or place within that territory, where the good's quality, reputation, or other attribute is largely due to its geographical origin.

d.Industrial designs

The member countries must ensure that fresh or unique industrial designs generated independently are protected. When such activities are conducted for commercial objectives, the

right holder can ban third parties who do not have the holder's agreement from producing, importing or selling items that incorporate the protected design.

e. Patents

A patent is an intellectual property right (IPR) awarded to inventors. The inventor, as the patent owner, has the right to prevent anybody else from creating, using, selling, or importing the patent-protected invention in a specified region for a set length of time.

f. **Layout-Designs of Integrated Circuits**

Importing, selling, or distributing (for commercial reasons) a secured layout design, an integrated circuit where a secured layout design is implemented, or an article including such a circuit is prohibited

g. Protection of undisclosed information

The information which is undisclosed is referred to as a trade secret . It provide trade secret protection in accordance with the Agreement's provisions.

1.8 Ministerial conferences

The Ministerial Conference, the WTO's highest decision-making entity, convenes typically every two years. It puts together all of the WTO's members, which are either nations or customs unions. All decisions pertaining to any of the multilateral trade agreements must be made by the Ministerial Conference.

About WTO Ministerial Conferences

The World Trade Organization's highest competent authority is the Ministerial Conference (WTO). From 1996 until 2022, there were twelve ministerial conferences, which were typically held every two years. Below are some brief details about all such twelve conferences held so far:

First Ministerial Conference

In 1996, Singapore hosted the first ministerial meeting. Its main goal was to launch a worldwide initiative among trading nations to reform the General Agreement on Tariffs and Trade

Second Ministerial Conference

During , 1998, Geneva, Switzerland hosted the 2nd WTO Ministerial Conference The fierce competition between huge corporations and between countries in the great race of globalisation had been discussed in this conference.

Third Ministerial Conference

In 1999, USA hosted the 3rd WTO Ministerial Conference. The conference's main objective was to make a resolution regarding the start of the so-called "New Rounds,"

Fourth Ministerial Conference

The Fourth Ministerial Conference in Doha, Qatar, declared in November 2001 that negotiations on a variety of topics and other tasks, such as concerns about the execution of the current accords,

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Fifth Ministerial Conference

From September 10 to 14, 2003, Mexico hosted the 5th WTO Ministerial Conference. The major goal was to evaluate the state of the . It accepted Cambodia and Nepal as the WTO's first newly admitted least-developed nations since the organization's founding.

Sixth Ministerial Conference

From December 13 to December 18, 2005, Hong Kong hosted the 6th WTO Conference Ministerial.. At this summit, nations decided to phase out all export subsidies for agriculture by the end of 2013

Seventh Ministerial Conference

From 30th November to 2nd December 2009, Geneva, Switzerland, hosted the WTO Ministerial Conference's 7th Session. "The WTO, the Multilateral Trading System, and the Current Global Economic Environment" was the overarching theme of discussion.

Eighth Ministerial Conference

From December 15th to December 17th, 2011, Geneva, Switzerland, hosted the 8th ministerial conference. Three working sessions with the topics of "Importance of the Multilateral Trading System and the WTO," "Trade and Development,"

Ninth Ministerial Conference

A set of decisions intended at streamlining trade, giving developing nations more choices for ensuring food security, enhancing trade with least-developed nations, and generally assisting development, was adopted by ministers at the 9th Ministerial Conference, hosted in Bali, Indonesia, from 3rd to 7th December 2013

Tenth Ministerial Conference

From December 15 to 19, 2015, Nairobi, Kenya, hosted the 10th Ministerial Conference of the World Trade Organization. It culminated," a collection of 6 Ministerial Decisions on matters pertaining to least-developed nations, cotton, and agriculture (LDCs)..

Eleventh Ministerial Conference

Argentina, hosted the 11th Ministerial Conference, the Conference concluded with a series of ministerial decisions, including ones on e-commerce duties and fisheries subsidies.

Twelfth Ministerial Conference

From June 12 to June 17, 2022, the WTO's twelfth Ministerial Conference was held in Geneva. Ministers from all over the world were present to examine how the multilateral trading system was operating, make general remarks, and decide how the WTO should proceed with its future activities.

Important Decisions of Twelfth WTO Ministerial Conference

Curtailing Harmful Subsidies in the Fisheries Sector

E-commerce Transactions

COVID-19 Vaccine

Thirteenth Ministerial Conference

The **13th WTO meeting** was held in Abu Dhabi in 2024, where new members joined and the online trade duty ban was extended.

1.9 Emerging issues in IPR –

Emerging Issues in Intellectual Property

The emerging issues have been steed below.

- **Artificial intelligence and machine learning**

The point is explained below.

- Artificial intelligence systems are forging patented inventions, copyrighted works, and trademarks at an increasing rate
- There is uncertainty regarding who owns the IP rights for such creations - the AI creator, developer or user
- Most nations have not set clear laws managing AI intellectual property rights
- This has led to legal fuss over who can claim ownership and benefit from AI-generated creations.

- **Digital technologies**

The point is explained below.

- Technologies like 3D printing, online content sharing, and blockchain pose a fuss in setting IP laws
- 3D printing enables easy, large-scale image of patented designs, which is hard to monitor or enforce
- Content-sharing media make it hard to track copyright breaches and enforce takedown requests

- **Knowledge economy**

The point is explained below.

- In the knowledge economy, the boundaries between basic research and commercial products/services are blurring
- This raises concerns that extensive IP defense could restrict access to learning and research that could benefit society
- There are calls for IP law reforms to achieve a better balance between the commercial interests of IP owners and the public interests of access to learning.

- **Globalization**

There is a need to harmonize IP laws and frameworks across nations to promote global trade, investment, and innovation. Yet, many nations approach IP differently based on economic growth priorities and interests. This gap has stalled, telling international IP law harmonization.

- **Public interest**

Intellectual property rights meant to incentivize creation and creation are being monitored if they disproportionately help firms at the cost of public interests.

- Strict IP protections are argued to raise prices, restrict access and create monopolies against the public interest.
- This has led to demands for IP law reforms that achieve a more equitable balance between commercial and non-commercial interests of knowledge sharing and access.

- **Economic growth**

Many developing nations argue that current IP laws favor set nations and deny their ability to utilize their ability for economic development.

- Strict IP protections prevent access to technologies, knowledge, and cultural effects for growth.

- This has stalled international IP law harmonization as forging nations lobby for more flexible IP regimes that support their foci.

Conclusion

While intellectual property rights aim to enable creation, several issues pose new fuss for IP regimes worldwide. Technological advances, financial changes, and the need for sustainable development demand timely and level reforms of IP laws and policies. While several nations are toiling to update IP laws to handle arising issues, useful keys are still lacking. Wide reforms must recognize the tricky interplay amongst IP, creation, access, trade and sustainable growth. The key is flat IP policies that enable the long-term gain of learning and interest for all.

1.10 Protection of plant varieties ;

PLANT VARIETY PROTECTION

Plant variety protection provides legal protection of a plant variety to a breeder in the form of Plant Breeder's Rights (PBRs). PBRs are intellectual property rights that provide exclusive rights to a breeder of the registered variety. In India, the Plant Variety Protection And Farmers Rights (PPVFR) Act, 2001 is a *sui generis* system that aims to provide for the establishment of an effective system for protection of plant varieties and the rights of plant breeders and farmers.

A certificate of registration for a variety issued under this Act confers an exclusive right on the breeder or his successor, his agent or licensee, to produce, sell, market, distribute, import or export the variety. Application for registration of plant varieties can be made in the office of Registrar, PPV & FRA, New Delhi.

Registrable Plant Varieties in India

The following types of plant varieties can be registered under PPVFR Act, 2001:

- New varieties
- Extant variety
- Farmers' variety
- Essentially derived variety

A new variety shall be registered under PPVFR Act, 2001 if it conforms to the criteria of novelty, distinctiveness, uniformity and stability.

Non- Registrable Plant Varieties in India

The following types of plant varieties cannot be registered under the PPVFR Act, 2001:

- Any variety where prevention of commercial exploitation of such variety is necessary to protect public order or public morality or human, animal and plant life and health or to avoid serious prejudice to the environment.
- Any varieties that involves any technology which is injurious to the life or health of human beings, animals or plants. The expression "any technology" includes genetic use restriction technology and terminator technology.

- Variety belonging to the species or genera which is not listed in the notification issued by the Central Government.

Duration of Protection for a Registered Variety

- **Trees and vines** – 18 years from the date of registration of the variety.
- **Extant varieties** – 15 years from the date of notification of that variety by the Central Government under Seed Act, 1966.
- **Other crops** – 15 years fifteen years from the date of registration of the variety.

1.11 Patent sharks –

Patent Sharks

What's a Patent Shark?

To be clear, patent sharks are not inventors who pursue their own line of research, visibly offer it for sale or licensing early on in the process, and then defend their rights against deliberate infringements.

Instead, they are entities that—opportunistically or intentionally—profit from payments by companies that inadvertently infringe on the sharks' IP rights simply because they never even knew those rights existed.

Case Example of Patent Shark:

. Chip maker Intel, for example, has had to pay Intergraph at least $675 million for infringement of its Clipper processor patents—even though Intergraph stopped manufacturing hardware years before and has never used some of the patents it holds in its products.

Case Example of Asure:

Another shark, Asure Software (formerly known as Forgent Networks), has also realized enormous revenues: more than $100 million from a single (acquired) patent.

Mechanism adopted by Patent Sharks:

a. Preliminary injunctions.

Sharks can put enormous pressure on manufacturers by threatening to shut down their operations using a preliminary injunction. This tactic is especially effective in a fast-paced, complex industry like mobile phone operations, where closing the doors—no matter how briefly—can put even an established player out of business.

Eg: Consider what happened to Research in Motion (RIM), which builds the best-selling BlackBerry and runs the mobile e-mail service of the same name. NTP, a pure patent-holding company, first filed suit against RIM in 2000 for violation of five of its patents and petitioned the court for an injunction on the sale and support of BlackBerry devices.

b. Damages.

Sharks can also win excessive damages at the end of an infringement trial.

The mechanism adopted by Patent Shark is

Hide – Seek – Sue

Hide : Obtain patent and hide themselves from the business operations for some time

Seek : After some years identify the organization using their patented inventions

Sue : File a case and claim huge damages for infringement of patent.

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1.12 Open-source movement – Bio-piracy

Open source software movement

The **open-source-software movement** is a movement that supports the use of open-source licenses for some or all software, as part of the broader notion of open collaboration. The open-source movement was started to spread the concept/idea of open-source software.
Programmers who support the open-source-movement philosophy contribute to the open-source community by voluntarily writing and exchanging programming code for software development.
Rights of Users related to Open Source Software:
All open source software grants users the following key rights:
1. The right to full access to the source code. When a computer programmer sees how a piece of software actually works, as specified in the source code, they can fully understand the inner workings and can intelligently modify the software as they deem appropriate.
2. The right for anyone to run the program for any purpose without restriction. There are no restrictions against commercial, military, foreign, or any other use, and discrimination against users for any reason is expressly forbidden.
3. The right to modify the source code. This includes absorbing the software, in whole or in part, into other pieces of software created by other developers.
4. The right to distribute both the original software and the modified software.
5. The right to know about their open source rights: The open source license must be prominently displayed and distributed to users, so that they are aware of their rights (including access to the source code).
6. The obligation to distribute derivatives under copyleft. Any software modified under the open source can be redistributed for sale, but it must be licensed under a copyleft license; that is, modified derivative works must also be made available under an open source license. While it does not have to be licensed under the GPL itself, the chosen distribution license may not restrict any of the five rights listed above

Evidence of open-source adoption

Libraries:
Libraries are using open-source software to develop information as well as library services. The purpose of open source is to provide a software that is cheaper, reliable and has better quality. The one feature that makes this software so sought after is that it is free. Libraries in particular benefit from this movement because of the resources it provides. They also promote the same ideas of learning and understanding new information through the resources of other people. Open source allows a sense of community. It is an invitation for anyone to provide information about various topics.

Government agencies and infrastructure software — Government Agencies are utilizing open-source infrastructure software, like the Linux operating system and the Apache Web-server into software, to manage information.

Open-source movement in the military — Open-source movement has potential to help in the military. The open-source software allows anyone to make changes that will improve it. This is a form of invitation for people to put their minds together to grow a software in a cost efficient manner. The reason the military is so interested is because it is possible that this software can increase speed and flexibility. Although there are security setbacks to this idea due to the fact that anyone has access to change the software, the advantages can outweigh the disadvantages.

Open source in education — Colleges and organizations use software predominantly online to educate their students. Open-source technology is being adopted by many institutions because it can save these institutions from paying companies to provide them with these administrative software systems.

Open source in healthcare — Created in June 2009 by the nonprofit eHealthNigeria, the open-source software OpenMRS is used to document health care in Nigeria. The use of this software began in Kaduna, Nigeria to serve the purpose of public health. OpenMRS manages features such as alerting health care workers when patients show warning signs for conditions and records births and deaths daily, among other features.

1.13 : Bio-piracy

Biopiracy

'Biopiracy' is an emergent term used to name illegal or improper appropriation of traditional knowledge and biological materials the fight against biopiracy,

Vandana Shiva interpreted that, biopiracy is a phenomenon of claiming property rights to biodiversity and its products through intellectual property rights regimes and patents based on indigenous and traditional knowledge

Categories of biopiracy

1 Patent-based biopiracy

The patenting of inventions based on biological resources and/or traditional knowledge that are extracted without adequate authorization and benefit sharing from other countries, indigenous or local communities

2 Non-patent biopiracy

Other intellectual property control based on biological resources and/or traditional knowledge that have been extracted without adequate authorization and benefit-sharing from other (usually developing) countries, indigenous or local communities [

Effects of Biopiracy: Examples: Asia: Use to have more than 100,000 varities of rice in 20th century Now: less than a dozen are planted in 70% of land being cultivated for Rice
India: 30,000 Now: 10 varieties

Protecting Traditional Knowledge from Biopiracy:
The term traditional know-ledge can be categorized into three classes:
Traditional Medicinal Knowledge (TMK),
Traditional Agricultural Knowledge (TAK) and
Traditional Ecological Knowledge (TEK).
Indigenous knowledge is a subset of traditional knowledge category, held and used by communities, peoples and nations. Indigenous people, especially in rural communities, uses Traditional Medicinal Knowledge (TMK) maintain their health systems

Case Examples on Biopiracy:

Recent cases of Bio-piracy

NeemPatent:

US patent office granted patent on a l product derived from seeds of the Neem

India opposed the patent by claiming that the properties of the Neem tree had been public knowledge in India for many centuries

The oil from neem has been used traditionally by farmers to prevent fungus. It was neither a novel idea nor was it Inventive.

The Patent was finally revoked by the European Patent Office.

Haldi patent- (Turmeric)

In December1993,a patent was filed by the University Of Mississippi Medical Center, Mississippi

Applicants received US patent 5,401,504 for the use of turmeric powder as a wound-healing agent.

Indian Government objected to the patent

The turmeric patent failed to satisfy the criteria of novelty inview of the cited turmeric’s qualities documented in ancient medical textbooks

UNIT–2: FUNDAMENTALS OF PATENT, TRANSFER AND INFRINGEMENT (9) Fundamentals of Patent: History of patents in India – Grant of patent – Inventions those are not patentable – Process and product patent – Specification and procedure of patent – e-filling – Temporal and spatial – Opposition to grant of patent – Rights and PCT of patents – Marketing rights – Milestones in Indian patent. Transfer and Infringement: Transfer and Infringement of patent rights – Surrender of patents – Challenges in patents

2.1 History of patents in India

Meaning of Patent : A patent is an exclusive right which is granted by the Government for an invention, for a limited time period.

This exclusive right of a patentee allows him to prevent a third party from using, selling or claiming the invention for which patent has been granted, in an unauthorised and illegal manner, while the term of the patent subsists. An invention which was granted patent can be used freely by the public after the term of the patent has expired or has ceased to have an effect.

Evolution of the patent system

The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.

As a member-nation of the WTO, India was required to amend or enact laws to conform to the TRIPS Agreement. However, this was a challenge for India.

The journey of the Indian patent regime is reflected in three different periods: colonization, post-independence and globalization.[7]

Colonization. India inherited its patent regime from the British rule. When the British colonization of India ended, the Indian Patents and Designs Act, 1911, was in force and had created a system of patent administration in India under an administrative office – the Controller of Patents and Designs.

Post-independence. India enacted its first independent patent law in 1970. It Focuses on the special socioeconomic conditions in India, Some of the significant changes introduced were with respect to food and drug patents, compulsory licensing, and connected working requirements. The law enacted in 1970 is credited with the growth of various industries, including the pharmaceutical industry, which, in two decades, gave India the distinction of being called "the pharmacy of the world" as Indian drug companies began exporting reasonably priced medicines to many countries.

Globalization. In 1991, India liberalized its economy and adhered to the General Agreement on Tariffs and Trade (GATT 1947), which was succeeded by the WTO, resulting in amendments being introduced in line with the TRIPS Agreement. These amendments saw India bring about fundamental changes permitting product patents in food, medicines and agrochemicals. The flexibilities in the TRIPS Agreement were used to maintain a balance: ensuring that the amendments would be gradually made systemic rather than forcing the closure of already-functioning industries. Statutory provisions relating to chemical and drug patents, patentability and other aspects of the amendments were tested repeatedly in the courts and were upheld as being within the Constitutional scheme while being fully compliant with the TRIPS Agreement.

The judgment of the Supreme Court in *Novartis* v. *Union of India*[8] recognized the need to curb the "evergreening" of patents while acknowledging the need to grant patent protection to incremental innovations. After *Novartis*, Indian courts have granted interim injunctions to protect patentees' rights in pharmaceutical[9] and agrochemical inventions.

The Indian Patents & Designs Act, 1911, was revised in 1950 after independence. The Indian Government created the **Justice N. Rajagopala Ayyangar Committee** in **1957** to look into the possibility of revising the famous Patent Law and make recommendations to the government. The patent legislation was established in 1970

2.2 Grant of patent

Grant of patents in India

Section 43 of the Patents Act, 1970 deals with the **Grant of patents**.

Conditions for Grant of Patents

The grant of a patent under the Patents Act, 1970 is not absolute. It is subject to certain conditions prescribed under **Section 47** of the Act. Therefore, the grant of a patent is subject to the following conditions:[5]

- the patent granted for any machine, apparatus, article or any article made by using a process, can be imported or made by the government or on its behalf solely for its own use;
- a patent granted for any process can be used by the Government or on its behalf for its own use;
- a patent granted for any machine, apparatus, article or any article made by using a process or where a patent is granted for any process, can be made or used by any person, for research or experiment purpose which also includes conveying instructions to students;
- where a patent is granted for any medicine or drug, the Government can import such drug or medicine solely for its own use or distribution in Government-supported dispensaries, hospitals, and other medical institutions and also those rendering public service.

Compliance of Conditions under the Act for Grant of Patent

A patent is granted promptly when:

- the patent application has not been declined by the Controller in the exercise of the powers vested in him; or
- the application is not in contravention of any provisions under the Act.

This includes within its scope:

- the objections raised by the examiner have been fulfilled and documents have been resubmitted that were returned with FER, within a period of 6 months or an extended period from the date of FER.
- where the FER refers to a prior art published before the date of filing of complete specification but after the date of priority, the applicant must prove that the priority date of the complete specification claimed is prior to the date on which the document was published. In the absence of such proof, the application can be refused.

Consequences of Grant of Patent

- every patent is assigned a serial number electronically, on being granted a patent. A "Certificate of Patent" is produced in a given format and an entry is made in the e-register. The date of recording the Patent in the Register of Patent and the date of grant of a patent by the Controller is the same.

- the complete specification of the invention which has been granted a patent is available on the official website.
- the public can inspect the patent application, specification, and other related documents by paying the requisite fee.
- the official journal of the Patent Office publishes the fact that the patent has been granted.
- the patentee must pay the requisite fee within 3 months on the grant of patent. This time period can be extended by 6 months.
- A post-grant opposition can be filed by any interested person within 12 months from the date of publication of the grant of patent.
- Every patentee must provide a statement with respect to the working of the invention to which a patent has been granted, commercially within a period of not less than 6 months, in a prescribed format.

2.3 Inventions those are not patentable

What Are Inventions?

As defined in ***Section 2 (j)*** the term "***invention*** means a new product or process involving an inventive step and capable of application". The invention should be of absolute novelty as neither it has been used nor published in any part of the world.

Section 3 And 4 Of The Indian Patent Act

Section 3 and Section 4 of the Patent Act is highly debatable and deals with the list of exclusions that are non-patentable that do not satisfy the above conditions. Following are not the "inventions" under the meaning of this act:

(a) Inventions that are frivolous

Inventions which are frivolous or contrary to well established natural laws.

Example*– Inventions that are against the natural laws that are any machine giving 100% efficiency, or any machine giving output without an input cannot be considered as obvious and cannot be patented.*

b) Inventions against public morality

Inventions in which the primary or intended use or commercial exploitation of which could be contrary to public order or morality (that is against the accepted norms of the society and is punishable as a crime) or which causes serious prejudice to human, animal or plant life or health or to the environment.

Example*– As in Biotechnology, termination of the germination of a seed by inserting a gene sequence that could lead to the disappearance of butterflies, any invention lead*ing to theft or burglary, counterfeiting of currency notes, or bioterrorism.

(c) Inventions that are a mere discovery of something that already exists in nature.

The mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living or non-living substances occurring in nature.

Explanation*– Mere discovery of something that is already existing freely in nature is a discovery and not an invention and hence cannot be patented unless it is used in the process of manufacturing an article or substance. For instance, the mere discovery of a micro-organism is not patentable.*

d) Mere adding of mixtures are non- patentable. A substance obtained by a mere admixing of two or more mixtures resulting only in the aggregation of the properties of the components thereof or a process for producing such substance is not considered the invention.

Explanation- mere addition of mixtures is non-patentable unless this satisfies the requirement of synergistic effect i.e., interaction of two or more substances or agents to produce a combined effect greater than the separate effect.

(e) Mere duplication of devices working in a known way is not an invention.

The mere aggregation or re-arrangement or duplication of known devices each functioning independently of one another in a known way.

Explanation- mere improvement on something or combinations of different matters known before cannot be patentable unless this produces a new result or article.

(f) Horticulture or agricultural method is non-patentable.

A method related to agriculture or horticulture.

Explanation- a method of producing plants like cultivation of algae and mushrooms or improving the soil is not an invention and cannot be patentable.

(g) Medicinal, curative, diagnostic methods for treating diseases in human and animals are non-patentable.

Any process for the medicinal, surgical, curative, diagnostic, 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.

Explanation– those medicinal methods administering medicines orally or injecting it, surgical methods like stitch free surgeries, curative methods as curing plaques etc does not fall under the ambit of the invention and are non- patentable.

Case law

In Mayo Collaborative Services V. Prometheus Laboratories, Inc20.

In this case, the US Supreme Court said that "diagnostic and therapeutic methods (which includes the treatment or cure of diseases) is not patentable as it claims a law of nature".

(h) Essential biological processes for the production of animals and plants is not an invention.

Plants and animals in whole or any part thereof other than micro-organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals.

(i) Simple mathematical or business or computer programs are not an invention.

A mathematical or business method or a computer program per se *or algorithms;*

Explanation– *any mathematical calculation, any scientific truth or act of mental skills any activities related to business methods or algorithms (which are like the law of nature) cannot be patented.*

(j) Aesthetic creation is not an invention.

A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions.

Explanation*– such activities like writings, painting, sculpting, choreographing, cinematographing all these which are related to creativity cannot be patented and fall under the gamut of Copyright Act, 1957.*

(k) Mental act, rule or method is not an invention.

A mere scheme or rule or method of performing mental act or method of playing a game.

Explanation- playing a game such as chess, sudoku etc are not considered as inventions rather these are mere brain exercises and hence are not patented.

(l) Traditional Knowledge is not an invention:

An invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties of the traditionally known component or components.
Explanation- the traditional knowledge is know-how, skills, that is passed from generations to generations of a community and is already known cannot be patented for example the antiseptic properties of turmeric.
(m) Atomic-Energy inventions are non -patentable.
Section 4 deals with inventions relating to atomic energy, that are also not patentable and that fall within sub-section (1) of section 20 of the Atomic Energy Act, 1962.

2.4 Process and product patent

Product patent vs process patent

The Indian Patents Act, 1970 provides for two types of patents, they are process and product patents. Let's discuss each of these types.

Product patent

As the name suggests, this type of patent protects the product. It offers the inventor higher protection for his invention by decreasing the level of competition of the same product. On the other hand, a process patent protects the manufacturing process of a product but not the product. The product patent maximises the level of monopoly and minimizes the competition. So, we can conclude that a product patent has the following features that eventually benefits the inventor or the patent owner:

- It provides a higher level of monopoly rights to the inventor of the patent owner.
- Such a grant prevents others from manufacturing the same product using the same process or a different process.
- Since the end product is given protection, the level of protection is considered higher in comparison with process patents.

Process patent

In this type, patent protection is granted only to a particular process used in manufacturing a product but not the end product. A process patent is often considered to provide limited protection. The reason is, it does not bar or prevent others from manufacturing or creating the same product by using a distinct process. Hence, it is possible that there are multiple process patents granted for a single product. This eventually reduces the monopoly that the inventor enjoys, thereby increasing the level of competition.

How are product and process patents different from each other

Sr.No	Basis	Product Patent	Process Patent
1	Definition	Patent protection is provided to the 'End Result' or 'the product'.	Process patent protection is provided to only the process, and not the resulting 'End Product'.
2	Competition	Once protection is granted, less competition	Competition shall remain
3	Monopoly	A higher level of monopoly is enjoyed by the inventor	Inventors do not enjoy a monopoly since other persons can still manufacture the same product using a different process.
4	Implementation	Product Patents were	Process Patents have been

		introduced as part of the Patents (Amendment) Act, 2005.	recognised in India ever since the Indian Patent Act, 1970 was enforced.
5	Example	The altered DNA will be provided protection and not just the process involved.	The patent will be provided to the process involved in altering the DNA as recognised by the Indian Patents Act.

2.5 a Patent Specification

Patent Specification

A patent specification is a disclosure to the public at large regarding the invention as well as the scope of protection that would be granted to the invention. It provides an opportunity for the applicant to provide information regarding the invention in order to be entitled to claim protection. It is a crucial techno-legal document constituted by scientific and technical disclosures which designate the basis of the rights of a patent.

Section 7(4) of the Patents Act, 1970 (**the Act)** directs that every patent application shall be accompanied by a provisional or a complete specification. The Patent Rules, 2003 (**the Rules**) also particularly deal with the specification of an invention.

Structure of the specification

A patent specification normally has the following parts in the order given:

- A title to identify the invention.
- A statement as to the field to which the invention relates.
- An explanation of the background "state of the art" – what was already known prior to the invention.
- A statement of an objective technical problem which the invention seeks to solve, or an objective the invention is aimed at achieving.
- Statements of invention which correspond in scope and content to the claims, including any statements of technical advantages achieved by the invention.
- A list of any drawings and brief summary of what they show.
- A description of specific examples of the invention, often with reference to any drawings.
- The claims.
- An abstract.
- The drawings.
- A sequence listing (in cases involving nucleotide and amino acid sequences).

The title

This may be relatively uninformative if it is desired to maintain secrecy for as long as possible (the whole specification is usually published after 18 months, but the fact that an application has been filed, by whom and with what title, is usually available soon after filing)

The field of the invention
The start of the specification is a brief paragraph summarising the field in which the invention lies. This is usually framed as broadly as possible and helps the reader to appreciate the greatest extent of the invention as described and claimed in the rest of the specification.

The background art
This section mentions relevant "prior art" documents known to the applicant and summarises the state of the art in the field before the invention was made. The function of this section is to set the backdrop against which the invention is to be contrasted, thereby highlighting non-obvious technical contributions to the state of the art. Statements of objective technical problems arising in the art before the invention was made are of assistance.

Statement of the objective of the invention
Generally, this is simply a statement that the invention seeks to overcome or at least mitigate the problems identified with the prior art in the previous section. The stated objective should not be too ambitious.

Statements of invention
The objective should be achieved by the invention set out in this part. . These recite only the essential features of the invention. Then there are subsidiary statements of invention.

The list of drawings
This merely identifies the drawings used.

The claims
These set out the scope of the patent monopoly being sought by the applicant. Occasionally, with a first patent application, claims are not filed immediately, but they must be filed eventually.

The claims are a series of numbered paragraphs, each containing a single sentence. The first claim is independent but second and subsequent claims generally refer to and include the contents of the first (and perhaps subsequent claims) so that they are narrower in scope because they contain more limitations. There may be more than one independent claim.

Each independent claim serves two conflicting purposes. The first is that they must define something that is new and inventive compared with the prior art, otherwise no patent will be granted. They must have sufficient specific detail to distinguish from the prior art.

The claims must be clear and concise. The claims must also be supported technically by the description in the sense that the extent of the claimed invention must be reasonably credible from the specific description and the exemplification of the invention.

Abstract
If present, the purpose of the abstract is to assist in the official classification of the application on publication and to provide text by which third parties may locate the application when

carrying out searches. The abstract may be brief and simply requires summarising in general terms what the specification is about.

The Drawings

These may be relatively crude so long as they are clear and show the required information. Known as "informal" drawings, they are used to keep initial filing costs under control. Replacement "formal" drawings, often prepared by a draughtsman, may be required in due course at additional cost in order to meet Patent Office requirements prior to publication of the application.

It is necessary to check that the drawings are correct technically and contain all of the necessary information. You should advise us of any corrections or additions required prior to filing.

Sequence listing

This is required in connection with biological inventions where nucleotide and/or amino acid sequences are present. It is presented as a text document with a particular format to enable patent offices to extract the information and facilitate searching of prior art documents during examination of this application, and of it, in due course, when it in turn constitutes prior art against subsequent applications.

2.5 b: Procedure of patent Filing and E- Filing

Eligibility for Patent Registration in India

Patent registration in India is subject to certain eligibility criteria that an invention must meet to qualify for protection.

- **Novelty:** To be eligible for a patent, an invention must be novel, meaning it should not have been disclosed to the public before the date of filing the patent application. The invention should offer something new and inventive, and it should not be a part of the existing knowledge or prior art.
- **Inventive Step:** An invention must possess an inventive step. The invention must involve a technical advancement or an inventive concept that is not readily deducible or obvious from existing knowledge or prior art.
- **Industrial Applicability:** The invention must have industrial applicability, meaning it should be capable of being made or used in an industry. It should have practical utility and be applicable in any field of technology.
- **Exclusions:** Not all inventions are eligible for patent registration. Certain subject matters are excluded from patent protection, including inventions that are contrary to public order, morality, or health. Discoveries, scientific theories, mathematical methods, aesthetic creations, and computer programs per se are also excluded from patentability.
- **Ownership:** The person seeking patent registration must be the true and first inventor or the assignee of the inventor. In case of joint inventors, they should be listed as co-inventors in the patent application.

- **Non-Disclosure to the Public:** It is important to note that the invention should not have been publicly disclosed before filing the patent application. Public disclosure may affect the novelty and non obviousness of the invention, potentially jeopardizing its eligibility for patent protection.

Stepwise Procedure for Patent Registration in India

Patent Registration process can be completed in multiple stages, beginning from Patent Search to the issuance of Patent Registration Certificate.

Step 1: Patent Search

Patent Search is the first step of Patent Filing procedure in India and is conducted worldwide to determine the novelty of an invention. Generally, it is considered safe to do patent searches before patent application filing. If an invention is found in prior arts or closely resembling prior arts, then the novelty of that invention can be challenged by the Indian Patent Office and the application can be objected to. Therefore, it is important to perform prior patent searches to assess the chances of your patent getting approved by the Patent Office.

Step 2: Drafting Patent Specification and Patent Application Filing

After conducting thorough searches worldwide, the specification of the invention is written in a techno-legal language with or without the inventor's claims. Without claims is the provisional specification and with claims is the complete specification. The specification outlines the field of invention, detailed description of the invention with working examples, and the best method to use the invention so that when it comes to the knowledge of a person skilled in the art, it can be easily used. Legal protection to the patent is granted when the specification is drafted with the inventor's claim and is complete.

After drafting the Patent Specification, begin the procedure for Filing Patent Application in India. The drafted provisional or complete specification is filed in Form-2 while Patent Application form is filed in Form 1 as prescribed by the Indian Patent Act. If a provisional patent specification is filed, then within 12 months of its filing, a complete specification has to be filed with the inventor's claims. There are 6 different types of Patent Application forms which can be filed on the basis of their purpose. These are:

- **Ordinary patent application:** Used to file a patent application directly in India, seeking protection only within the Indian territory.
- **PCT National patent application:** Used to enter the national phase of PCT or Patent Cooperation Treaty in India, after which the applicant will be allowed to seek patent protection in multiple countries.
- **PCT International patent application:** Used to file a single patent application for patent registration in multiple countries which are members of the PCT, providing a centralized process for seeking patent protection internationally.
- **Convention patent application:** Used to claim priority based on an earlier application filed in a convention country, allowing applicants to secure the priority date for their invention.
- **Divisional patent application:** Used to divide an existing patent application into multiple separate applications, typically when the existing application contains multiple inventions.
- **Patent of addition application:** Used to file an application for an improvement or modification of an already existing invention for which a patent has already been granted.

Step 4: Patent Publication for Public Opposition

Once the patent application process is complete, then after the expiry of 18 months from the date of patent filing or date of priority whichever is earlier, the patent is published in an official

journal and is open for public viewing and inspection. This provides an opportunity to the general public to raise an objection to the patent on valid grounds.

Step 5: Requesting Patent Examination

The patent application is examined only when a request for examination has been filed. The request for examination has to be filed within 48 months of the patent filing date or date of the priority. The patent examiner examines a patent application and issues an examination report. The examination report contains a series of objections raised by an examiner. The response to an examination report has to be filed within 12 months of the issuance of the examination report. If needed, the examiner can call the applicant or his agent for a show cause hearing to resolve the objections. That's why this phase is also called patent prosecution.

Step 6: Grant of a Patent

After all objections to the examination report have been replied to and the examiner is satisfied with the reply of the applicant, the application is put in order for grant of Patent Registration. This marks the end of the procedure for registration of Patent. On the other hand, if the examiner is not satisfied with the reply and arguments of the applicant, then he/she can reject the patent application. In this case, the applicant will again have to repeat the entire patent procedure in India again to get patent protection.

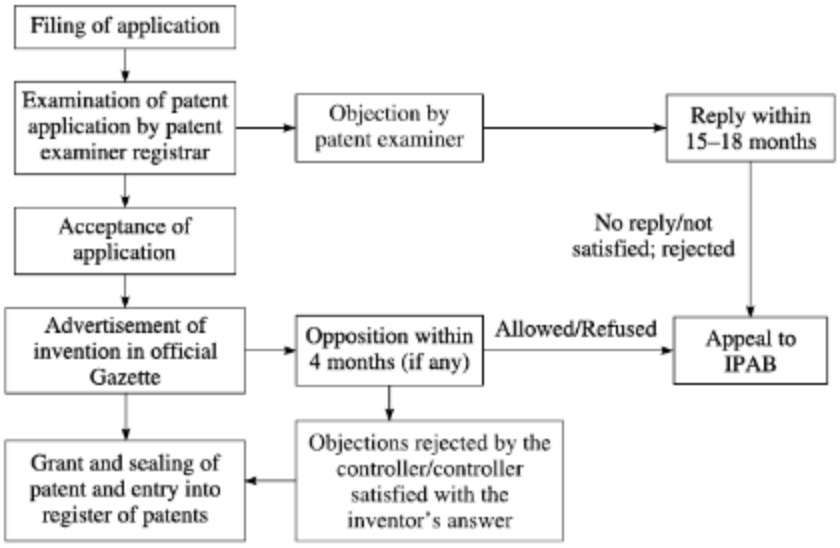
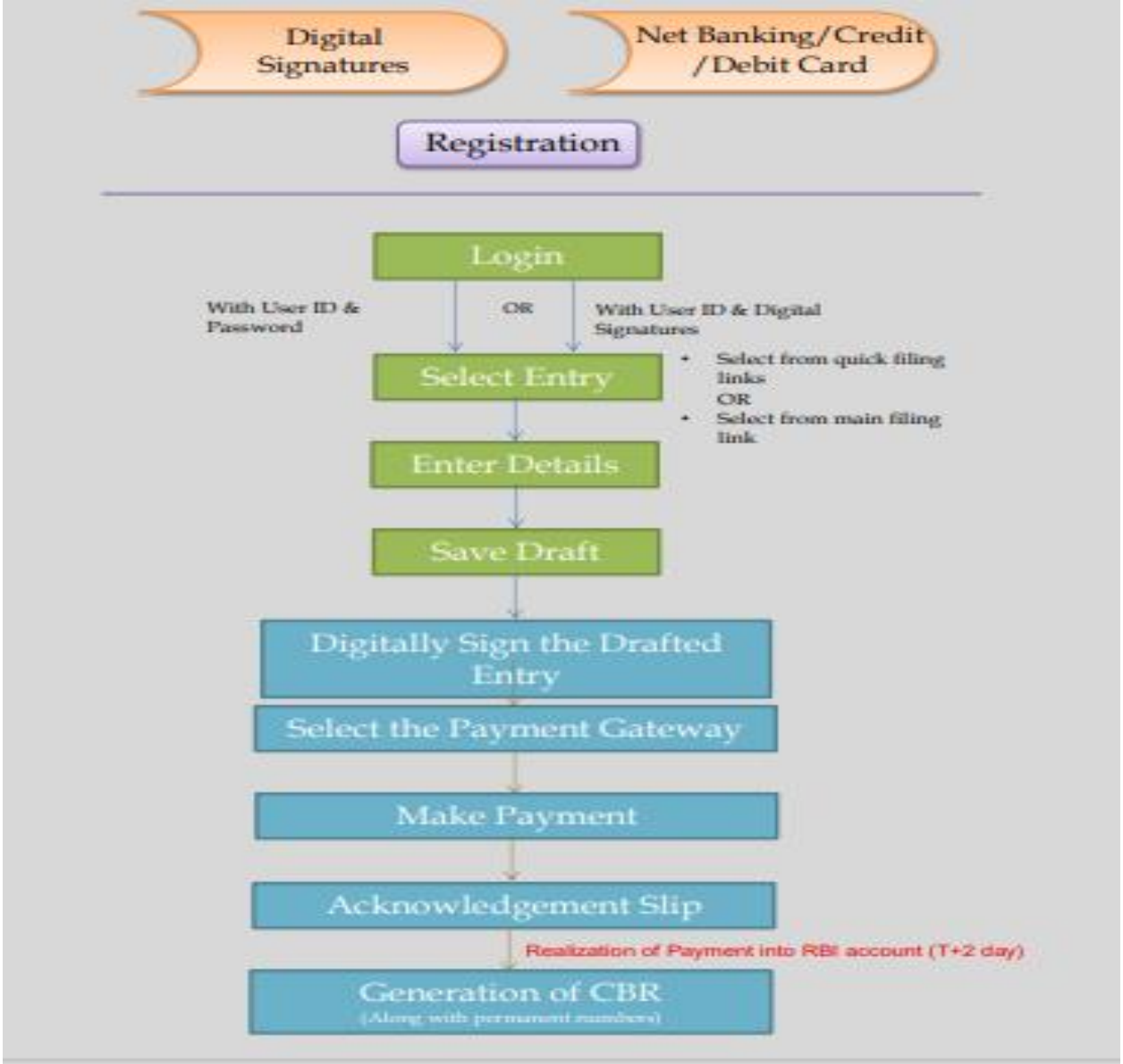


Figure 2.1 Procedure for Grant of Patent.

Cost & Validity of Patent Registration Applicant T	E-Filing Fee (INR)	Physical Filing Fee (INR)
Natural person(s) and/or Startup*	1,600 (within 30 pages, 10 claims)	1,750 (within 30 pages, 10 claims)

Cost & Validity of Patent Registration Applicant T	E-Filing Fee (INR)	Physical Filing Fee (INR)
Small entity, alone or with natural person(s) and/or Startup	4,000 (within 30 pages, 10 claims)	4,400 (within 30 pages, 10 claims)
Others, alone or with natural person(s) and/or Startup* and/or small entity	8,000 (within 30 pages, 10 claims)	8,800 (within 30 pages, 10 claims)
Additional Fees	160 per extra page 320 per extra claim	180 per extra page 350 per extra claim

Steps in E- Filing:



2.6 Temporal and spatial Aspects of Patent

The system of patent has temporal and spatial aspects. Temporal aspects relates to the time period and spatial aspects related to the geographical location.
FEATURES/DIFFERENCE BETWEEN TEMPORAL AND SPATIAL ASPECTS OF PATENT:

1, MEANING
TEMPORAL ASPECTS: It relates to the time period applicable for patents.
SPATIAL ASPECTS: It refers to the geographical location to which patent rights are exercised.
2. LIMITS
TEMPORAL ASPECTS: The patents are granted for a maximum period of 20 years.

SPATIAL ASPECTS: The patents are granted separately for each country. There is no patent called as world patent. The patent has to obtained I each country individually

3. ANALYSIS :

TEMPORAL ASPECTS: Analysis of patents over a time period which provides trends in patents during certain years.

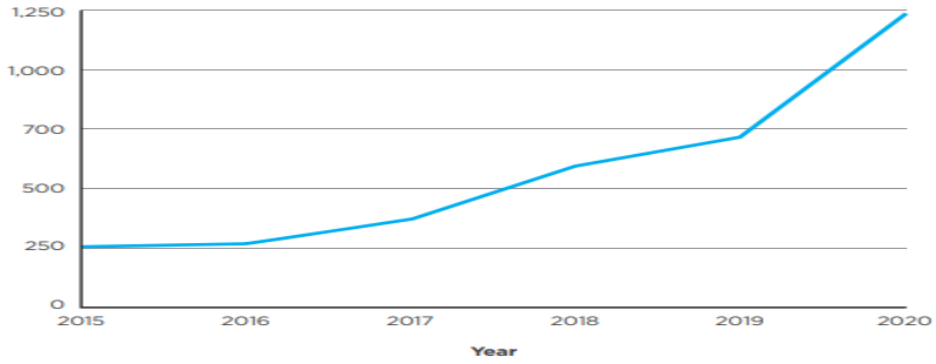
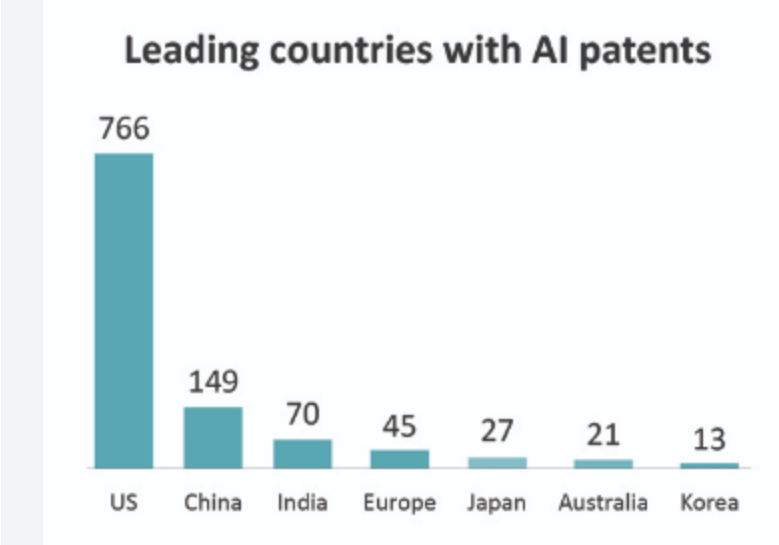


Fig. 5: AI-related publications on arXiv from India 2015- 2020

SPATIAL ASPECTS: The comparison of patents in different countries or region.



2.7 Opposition to grant of patent

Opposition In India: Complete Procedure

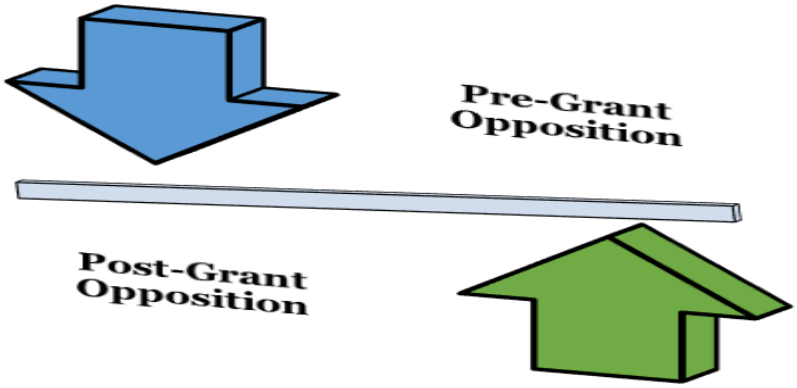
What Is Patent Opposition?

Patent Opposition proceedings provides opportunities for individuals or public at large or organizations to challenge the pending application of Patents or the granted Patents. The Patent Opposition, if appropriately used, can act as a vital tool in preventing the grant of frivolous Patents.

Even though the goal of preventing the grant of frivolous Patent can be attained by way of Revocation of Patent and other litigious options, but the Opposition of Patent serves as the most cost-effective route.

A Patent acquires a much higher Patent value if it passes the test of the Opposition of Patent. In India, the system of Patent is unique as it provides two kinds of process for the Opposition of Patent at two different phases of Patent prosecution.

The two types of Patent Opposition are as follows:



- Pre-Grant Opposition; and
- Post-Grant Opposition.

The grounds of Opposition of Patent were:

- Anticipation by publication which is prior;
- Prior Public knowledge and Prior public usage;
- Lack of inventive step and Obviousness;
- Non-patentability as per the Patent Act, 1970;
- **Inadequacy and clearness of description**

What Is Pre-Grant Patent Opposition?

Under Section 25(1) of the Patent Act, 1970, provides for the provision of filing a Pre-Grant Opposition of Patent against an application of Patent filed at IPO. As per Section 25(1), any person, any third party, or the Government can challenge the application filed for grant of Patent.

The opposing party should inform the Controller of Patents about the opposition, in writing, against the granting of the Patent. The Opposition of Patent should be made by the opponent party, after the publication of the application of Patent, but the Opposition should be filed before the grant of the Patent.

Pre-grant Opposition of Patent serves as a defensive shield for confirming the validity of the applications of Patent before the granting of Patents to the applicants. The procedure of Pre-Grant Opposition of Patent acts as a security net to capture doubtful applications of Patent before a patent is granted to the applicants.

What Is The Procedure For Pre-Grant Patent Opposition?

The procedure for filing for Pre-Grant Opposition of Patent in India is as follows:

- The opponent has to file a representation for the Opposition in Form-7(A). The representation Form should be submitted along with the evidence and statement supporting the Opposition of Patent. The representation can only be filed by the opponent, if a request for examination of an application of Patent is already filed with the IPO;

- The Controller of Patent after considering the representation decides that there is some merit in the representation filed by the opponent, he/she will give the notice of opposition of Patent to the applicant of the application of Patent;
- After the opposition notice is received by the applicant, he/she will file a reply to the representation of the opponent along with evidence supporting the application of Patent. The reply should be filed within 3 months from the date of receipt of the notice from Controller of Patent;
- The Controller, after considering the representation of opponent and reply of the applicant, along with the supporting evidences from both sides and after hearing both the parties, if a request for the same is made, can reject the Pre-Grant representation for Opposition of Patent and grant the Patent. On the other hand, the Controller, if is satisfied with the representation, can ask the applicant of Patent to amend the complete specifications of the Patent to his/her satisfaction before any further proceeding for the grant of Patent.

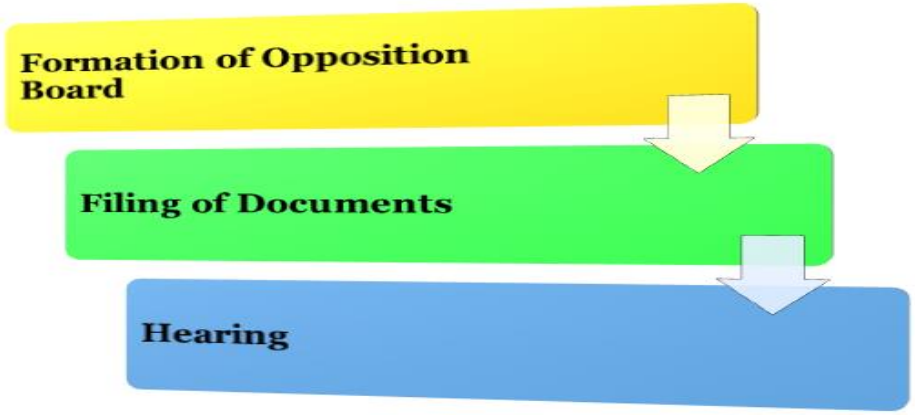
What Is Post-Grant Patent Opposition?

As per Section 25(2) of the Patents Act, 1970**[1]** any interested person can file for Post-Grant Opposition of Patent.The Opposition should be filed within 12 months from the date of publication of the grant of a Patent. The Opposition can be filed based on any of the grounds as prescribed in the Patent Act, 1970, by giving a notice of Opposition of Patent to the Controller of Patent.

The Post-Grant Opposition of Patent grounds is identical to those for the Pre-Grant Opposition of Patent. After notice is received, the Controller of the Patent should inform the Patentee about the Opposition of Patent and orders an Opposition Board to examine the Opposition made by the opponent and give its recommendations to the Controller.

What Is The Procedure For Post Grant Patent Opposition?

The procedure for Post-Grant Opposition of Patent is as follows:



Formation Of Opposition Board

The Controller of Patent will order the Opposition Board for the examination of the Opposition filed by the opponent***. The Opposition Board consists of a total of 3 members. Out of the 3 members of the Opposition Board, one member is nominated by the Controller of Patent to chair the Opposition Board.*** Generally, the members of the Opposition Board are Patent examiners, except for that Patent examiner who has dealt with the same Patent application against which Opposition is filed.

Filing Of Documents

The opponent is required to file a copy of the written statement of Opposition and the supporting evidence of the Opposition.

In the written statement, the opponent must specify the following things:

- The nature of the interest of the opponent;
- The material facts on which the case is based;
- The relief which is sought; and
- any supporting evidences, if any.

Hearing

After the recommendations of the Opposition Board are received, the Controller of Patent should fix a date and time for hearing both the parties. The members of the Opposition Board are required to be present at the time of the hearing.

The Controller of Patent, after hearing both the parties, or without a hearing if neither of the party wishes to be heard, and considering the recommendations of Opposition Board, the Controller can give an order that the Patent be either maintained, amended or revoked.

What Are The Landmark Cases On Patent Opposition In India?

The landmarks cases on Patent opposition in India are as follows:

- ***Novartis AG vs. Natco Pharma Ltd***

2.8 a Rights of the Patentee

Patentee's Rights According to the Patent Act, 1970

The Patent Act of 1970 in India grants rights and obligations of patentees in India, allowing them to use their patented inventions or processes. The rights bestowed upon a patentee include the following:

1. Right to Exploit the Patent:

Under the rights and obligations of patentees in India, the first right ensues when the invention is a product. In this case, the patentee has the exclusive rights to use, make, import, or sell the invention within India. In the case of a process, the right to exploit refers to the exclusive authority to use or exercise the process within India.

2. Right to Grant licence:

The patentee holds the authority to grant licences, transfer rights, or establish agreements for consideration. For validity, any licence or assignment must be documented in writing and registered with the Controller of Patents. Unregistered assignments are not recognised as evidence of patent title.

3. Right to Surrender:

A patentee can choose to surrender their patent at any time by providing notice in the prescribed manner. This is usually done through publication in the Journal, allowing opposition if necessary. Surrender is exercised when the patentee anticipates non-performance of the patent in the future.

4. Right to Sue for Infringement:

Patentees have the right to initiate legal action against patent infringement in District Courts, which hold jurisdiction to adjudicate such cases.

5. Right to Use and Enjoy Patent:

The patentee exclusively enjoys the right to exercise, utilise, convey, offer, or practice the patented product or process within India.

Obligations of a Patentee Under the Patent Act, 1970

Upon being granted a patent, rights and obligations of patentees in India come into operation as per the Patent Act of 1970. These obligations ensure that the patent system operates effectively, encourages transparency, and maintains the balance between innovation and public interest. The patentee's obligations include the following aspects:

1. Duty to Disclose

Section 8 of the Patent Act, 1970, imposes the obligation of disclosure upon the patentee. This requires the patentee to furnish information regarding any corresponding or similar patent applications filed by them or on their behalf. Specifically, within 6 months from the filing date, the patentee is obligated to disclose these particulars. Additionally, ongoing updates about any subsequent applications must also be provided.

2. Duty to Request Examination (Section 11B):

Unlike some other intellectual property rights, the patent application process doesn't inherently include an automatic examination step. **Under Section 11B of the Patent Act, 1970,** the patentee has the responsibility to actively request the Controller of Patents to examine the application for patentability.

3. Duty to Respond to Objections:

After the examination request is submitted, the application undergoes scrutiny by a patent examiner. If objections arise during this evaluation, they are presented in the form of a First Examination Report. The patentee has the obligation to respond to these objections within a year from the issuance of the FER. Failure to comply could result in the application being deemed abandoned by the Controller of Patents.

4. Duty to Clear All Objections:

It's the patentee's responsibility not only to respond to raised objections but also to address and resolve them adequately. If necessary, the patentee may need to attend meetings with the Controller of Patents to discuss and resolve outstanding issues.

5. Duty to Pay Statutory Fees (Section 142):

The patentee is obligated to pay the stipulated statutory fees during the patent application process. Non-payment of these fees could lead to the non-processing or rejection of the application. **Section 142 of the Patent Act, 1970,** outlines the fee payment requirements and the potential consequences of non-compliance.

2.8 b PCT

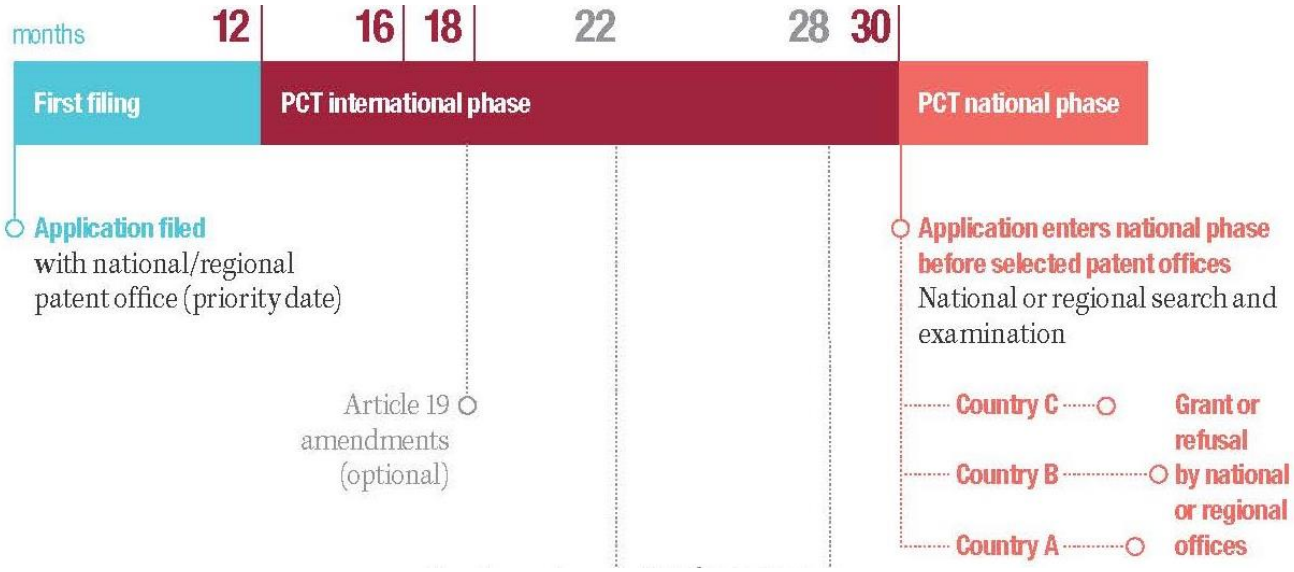
The Patent Cooperation Treaty (PCT) is an international IP agreement that provides patent protection in several countries through the filing of a single common application. The treaty,

governed by the World Intellectual Property Organization (WIPO), has more than 150 nations as signatories, who are also known as PCT Contracting States.
Filing patent applications under PCT implies securing legal protection for an invention under patent law in more than 150 countries at once. Major global corporations, research institutes and universities seek patent protection via PCT. It safeguards applicants against accidental errors which are far more likely to occur if a separate application is filed in every country of interest.

The Patent Cooperation Treaty (PCT) assists applicants in seeking patent protection internationally for their inventions, helps patent offices with their patent granting decisions, and facilitates public access to a wealth of technical information relating to those inventions.

By filing one international patent application under the PCT, applicants can simultaneously seek protection for an invention in a large number of countries.

PCT ECHANISM/PROCESS:



PHASE 1 : NATIONAL PHASE/FIRST FILING:
First applicant need to file patent application in home country. Applicant need to file a national application along with international application in one language and need to pay single set of fee. PCT application is to be filed within **12 months** after filing a national application. Priority date is given by the national office.

PHASE 2 : INTERNATIONAL PHASE:
Application is transmitted to an International searching authority. An International Searching Authority search an application and check for a prior art and state of art. They made it clear whether or not document that have been presented is eligible for grant of patent. They establish it on the basis of their written opinion. Within **16 months** from the date of filing, ISR (International search report) will give search report with written opinion.
After submitting the necessary document user application is published, after the completion of **18 months**. WIPO publishes the PCT application. Content of application is disclosed to the general public.

PHASE 3 : NATIONAL PHASE:

After completion of all necessary requirements patent is granted by national office of different countries. National phase which follows the international phase in which rights are continued by filing necessary documents with the patent offices of separate countries of the PCT. Patent is granted to the applicant before the completion of **30 months** .After this applicant can seek protection.

2.9 Marketing Rights

Product Patent and Exclusive Marketing Rights-

The term Exclusive Marketing Rights (EMRs) means the right to sell or distribute the article or substance covered in a patent or patent application in the country. EMRs will be granted when the there is no system of product patent in a country. It is only a temporary arrangement which will cease to have effect when product patent regime is introduced.

Exclusive Marketing Rights

EMR provision was introduced in India in the year 1999 in compliance with TRIPS as product patent for drug and medicine was not available in the Indian Act. As product patents can now be granted for Drugs, medicines, food, and chemical processes the EMR provision has become redundant and has been repealed.

Benefits of exclusive marketing rights

EMR provides an exclusive right to the person who files for a patent to distribute an output in their country for a period of five years. The applicant is also given the right to access to the agent, the sale or distribution of the article. While it is a provisional solution, it has its own benefits:

- It follow natural justice principle to the Owner and the public at the same time, as a useful and novel or new drug could be distributed while giving the due profits to the inventor.
- It is an effective process compared to the rigid terms of a patent that need to be satisfied.
- It is also in adherence to the norms of the TRIPs Agreement.

Article 70.9 of the agreement states that EMRs lay down the following conditions of obtaining an EMR for a particular product-

1. A patent application is pending in that member country where EMR is being sought.

2. A patent has been granted for that product in another member country.

3. Marketing approval has been obtained in such other member country.

In *Novartis AG v Adarsh Pharma and Anr. 2004*, the plaintiff was a swiss pharmaceutical company that created a unique drug as a remedy for blood cancer. They had filed for patents in many countries where it was pending and they were also granted the patent for this drug in a few countries.

They contended that since India was a member of the WTO, it must adhere to its guidelines by providing them with EMR as an interim measure until their patent was granted.

It was held that the Plaintiff was eligible for EMR under Part IV-A of the Patent's Act and was thereby the court granted for the first time EMR in India.

2.10 : – Milestones in Indian patent.

Milestones in Patent:

i. Amendments in Rules: The Patents Rules have been amended in 2016, 2017 and 2019 while the Trademarks Rules have been amended in 2017 to achieve the objective of removing procedural inconsistencies and unnecessary steps in processing of applications to speed up grant/registration and final disposal. By amending the Rules, the procedures are made more compact, time-bound, user-friendly and compatible for e-transactions. In Trademarks,

74 Existing Forms replaced by 8 consolidated Forms; One application form for all types of trademark applications provided; Process for determination of well-known mark laid out; Express provision for filing applications for sound marks provided; Procedures relating to registration as Registered User of trademarks simplified; and Expedited processing of an application right up to registration stage provided.

ii.. Use of IT and Technology:

• Paperless electronic processing implemented in Patent Office and Trade Marks Registry.

• E-filing of applications in Patents, Designs and Trademarks is available on 24x7 basis and has increased to more than 90% in Patents and Trademarks and 75% in Designs. 10% rebate on online filing in Patents and Trademarks to increase in online filing.

• Email as a mode of service has been implemented in all IPO transactions. • Online delivery of Certificates of Grant/Registration of Patent, Trademark and Designs in digital format implemented. • Registration of Patent Agents and issuance of certificate for registration of Patent Agents is made online. • The office has started periodic publication of list of First Examination Reports (FER) issued by the Patent Office.

iii. Manpower Augmentation: In order to remove the backlog and enable speedy examination/disposal of IP applications, the manpower in IP Offices has been augmented substantially. Examiners of Patents & Designs have been recruited during 2016 and recruitment of 220 new examiners of patents in different fields was made during 2019 to have the sufficient strength.

iV India's and WIPO : The Government of India has accepted the proposal for India's accession to the WIPO Copyright Treaty and WIPO Performers and Phonograms Treaty, which extends the coverage of Copyright to the internet and digital environment, and also the proposal for accession of India which will help the Indian IP Office to harmonize the classification systems for examination of trademark and design applications, in line with the classification systems followed globally.

v. India and Japan: A pilot Patent Prosecution Highway (PPH) project with Japan has been signed and started in the month of December 2019

<u>TRANSFER AND INFRINGEMENT</u>:

2.11 Transfer

Transfer of Patent:

A patentee has the choice to prevent others from producing, using, practising, or selling the invention without his permission after receiving a patent.

A patentee can transfer the ownership of the patent to another to use the invention by way of:

- Assignment

- Licenses
- By activity of law

Assignment

Assignment is not defined in Indian Patents Act. The patentee transfers all or a part of his patent rights to the appointee who obtains the right to prevent others from creating, utilising, practising, or disseminating the invention. Section 50(3) of the Patents Act, 1970 states that in case a patent is co-owned by two or more individuals, any share of the patent cannot be assigned to anyone else without the consent of all co-owners.

Types of Assignment

There are three types of assignments.

- **Legal assignment**

An assignment (or consent to appoint) under a valid patent is one in which the trustee may identify himself as the patent owner. A deed must be used to allot a patent that was created through one. All patent rights are granted to a duly appointed person who is qualified to be its owner.

- **Equal or Equitable assignment**

Any form or agreement including a letter in which the proprietor agrees to share a certain share of the patent with another individual is referred to as the equitable assignment of the patent. In any case, an appointee in such a situation is not eligible to have his name listed as the patent owner in the register. However, they can notify the register of their interest in the patent.

- **Mortgages**

Mortgages are assignments in which the owner transfers all or a portion of their rights to the assignee in return for a fixed sum of money. The owner regains full ownership of the mortgaged property once the debt has been settled. The lender must have their name listed in the register as a mortgagee rather than registering themselves as the proprietor.

Licensing

Patent licensing is a process of granting permission to a third party to extract benefits by selling and using the licensed product. The patent owner gives license to a third party to use his patented invention based on the agreement and royalty. The license can be given for a period of time as per the mutual understanding between patent owner and licensee. During this time period, the licensee can use patented invention and can take financial benefits.

Types of License

The license may be exclusive or non exclusive. It is further classified into

- **Sub license**

Licensee has rights to issue Sub license to different organizations for making the product of patented invention. Patent owner give rights to licensee and the licensee has the right to issue the license further to a third party that can use patented invention. The financial benefits will depend on the contract between the primary licensee and third party.

- **Cross-license**

Cross-Licensing is the exchange of licenses between different organizations and creators. When invention requires the support of other products to make its place in the market, Cross-Licensing process is used.

- **Voluntary licensing**

Licencing on a voluntary basis is a gesture of goodwill towards the community. It also applies to patents for medicines. With voluntary licencing, the owner of a patent can grant the right to produce, import, or distribute a pharmaceutical product to other parties on an exclusive or non-exclusive basis. The licensee is allowed to sell and distribute the goods in a market, according the agreement. According to the terms and conditions outlined in the contract, the patent owner receives their royalty.

- **Compulsory licensing**

In Compulsory Licensing, the authorization is given to a third party to make, use or sell a patented invention without the consent of patent owner. According to the Sections 84 and 92 of Indian Patent Act 1970, if the specified conditions are satisfied, license can be granted to a third party without permission of patent owner. . Compulsory Licensing is usually reserved for pharmaceutical patents. Government allows someone to practice patented invention to make, use or sell patented invention without taking permission of patent owner for the public benefits.

- **Carrot licensing**

This strategy is appropriate when the potential licensee is not using the patented innovation and is not obligated to obtain a licence. In this situation, the patent holder must persuade the party to use his product and explain how licencing it can be advantageous for them. In a marketing strategy known as carrot licencing, the owner of the patent tries to demonstrate to the licensee what may be accomplished by purchasing a licence for it.

- **Stick licensing**

Stick Licensing is another approach of licensing which is totally contrast of the carrot licensing. In Stick Licensing approach, prospective licensee is already using the patented technology and thus infringing the patent. The patent owner can file a suit against the infringer or settle with the infringer agreeing to license his patent.

- **Difference between Assignment and Licenses**
-

Assignment	License
Assignment refers to the transfer of ownership and of the patent to the assignee.	A license grants you the permission to use any patented invention, which would otherwise be referred to as infringement.
Assignments must be executed in writing.	Licenses can be granted without any written documentation.
Assignees don't need to pay any royalties to the original owner.	Licensees may be expected to pay certain royalties in exchange of using the inventor's product.
As you become a proprietor of the patent, it may be a bit expensive to get an assignment.	Licenses are much cheaper than assignments as you will also be paying some royalty in exchange of using the

	patent.

Transmission of Patent by Operation of law

When a patentee passes away, the patent's premium passes to his legal representative. If an organisation dissolves, goes out of business, or is liquidated, the patent is transferred by legal means.

2.12 Infringement of patent rights –

Patent Infringement:

Introduction

A patent is an invention-based legal document that defines and provides the bearer with exclusive rights to exclude others from producing, selling, or distributing such an invention. The violation of these exclusive rights of the patent holder is known as patent infringement. The patent is granted by the government for a limited period of time. This is to say that if the rights granted to the patentee are exercised by someone else who is not authorised by the patentee, then it would be considered a violation of patent rights, and the person is made liable for the same.

The Patents Act, 1970 does not provide specifications as to what would be considered an infringement of a patented product. But it lays down two kinds of activities (read with Section 48) which, when committed without the consent of the patent holder, would constitute infringement:

- Making, using, offering for sale, selling, importing the patented product,
- Using the patented process, or using, offering for sale, selling, or importing the product directly contained by that process.

Legislations governing patent infringement

The major enactment governing patent infringements in India is the Patents Act, 1970 which was implemented in 1972. It made pharmaceutical product innovations, as well as those for food and agrochemicals, un-patentable in India. It allowed for the copying and marketing of innovations in India that were patented elsewhere in the world. This Act also imposed restrictions on the import of finished formulas and introduced strict price control regulations. However, this act proved detrimental to foreign investments in the country since it did not benefit the big foreign multinational corporations and was not in consonance with the global patent system.

In 1992, India became a member of the WTO, and therefore, it became important to amend the existing law in order to meet the requirements of the TRIPS agreement. In order to comply with the TRIPS agreement, the introduction of Exclusive Marketing Rights (EMR) and the mailbox system was important. Under the EMR, exclusive rights would be provided to a foreign company to market a pharmaceutical or agricultural product in the Indian market for a specified period of 5 years.

Types of patent infringement

There are different kinds of patent infringement that are possible. They are listed and discussed as follows:

- Direct Infringement
- Indirect Infringement
- Wilful Infringement

Direct infringement

This is the most common type of patent infringement. As the name suggests, when a patented product or method (or substantially similar, i.e. equivalent to them) is used, marketed, sold, offered for sale, or imported without permission of the patentee during the term of such a patent, it constitutes direct patent infringement. It is considered to be of two types, viz- literal and non-literal patent infringement. They are discussed as follows:

Indirect or induced infringement

Indirect infringement is a type of patent infringement where the patentee's rights are involuntarily or unwillingly infringed by an infringer. It may so happen that some amount of deceit may be involved too. These days, products are becoming increasingly complex, and one end consumer product consists of multiple patented components. The manufacturer of such products cannot always have all the patent rights to the components of such products. Usually, the manufacturer takes licences for such required components to make and sell his products. But still, at times, a substantially similar product (mostly by accidents) is created because the indirect infringer had supplied some necessary components to make the substantially similar product, and the manufacturer ended up making the same without the full set of necessary permissions (licences) for each of the patented components. An illustration will make this clearer.

Illustration: Suppose X has a patent on a particular type of sound system. Y makes a substantially similar sound system (that infringes X's patent) with the help of Z's supply of a particularly essential component. Here, Y has committed direct infringement, and Z has committed indirect infringement of X's patent rights.

Willful infringement

As the name suggests, willful infringement is the type of patent infringement in which the infringer intentionally or willfully disregards and violates the patent rights of the patentee. In other words, if the infringer had knowledge of the patent and still violated the same, then such an infringement shall be a willful infringement.

So, what becomes important to establish here is that the infringer had knowledge of the patent, and the patentee has the burden to prove this to establish willful infringement. Usually, the patentee tries to discharge such onus by establishing that the infringer was duly served notice but continued infringement nonetheless. In such a case, the infringer has the defence to show that he had taken a legal opinion on the same and continued infringement because he believed in a *bona fide* manner that such a patent was either invalid or his actions did not constitute infringement.

If a patentee can successfully show willful infringement, then the infringer may have to face substantial pecuniary penalties that usually cover the legal fees of the patentee and even three to four times the actual damages faced by the plaintiff.

A significant case law in this regard is *Power Lift, Inc. v. Lang Tools, Inc. (1985)*, where the infringers (Lang Tools) were held to have infringed Power Lift's patent willfully.

Remedy for Patent infringement :

The patentee can file the case in the place of his residence or the place where he carries out his business, or where the cause of action arises. Section 48 of the Indian Patents Act contains the rights of the patentees. It lists the following activities as the infringement of the patentee's rights:

- Using,
- Making,

- Importing,
- Offering for sale patented products,
- Selling the patented products or products directly obtained from the patented process.

The remedies available to the patentee are:

Temporary injunction

A temporary injunction is invoked by the court at the initial stages of the suit filed by the plaintiff. This is passed in order to prevent the defendant from getting further gains by using other patented products. In order to invoke a temporary injunction, it is important for the patentee to prove that the patent is valid and has been infringed by the defendant. Also, the subsequent infringement of his patent rights has caused him irreparable loss.

Permanent injunction

A permanent injunction is invoked when the case is finally decided by the court. If the defendant is found guilty of patent infringement, the temporary injunction becomes a permanent one. However, the temporary injunction is dissolved and does not become a permanent injunction if the defendant is released from liability.

Damages

In case the defendant is proven guilty, the plaintiff is either awarded damages or an account of profits by the defendant. Damages may not be provided to the plaintiff in case the defendant pleads ignorance and proves that he had no reasonable grounds to believe that the said patent existed at the time of infringement.

2.13: Surrender of patents – Challenges in patents

Surrender of patents

"Sometimes it is wiser to step back and acknowledge than to stand up and confront" – a popular epigram summarizing the ostensible intent behind surrendering a patent (in idiosyncratic circumstances) by a patentee in India. While it might be a strategic decision (or based on a number of other reasons), surrendering a patent, and in turn the rights conferred upon the patentee by the grant of such patent, is an important provision provided in the Indian patents regime.

Cases where the patentee can opt for surrendering his patent

- A patentee wishing to avoid his patent being challenged by an opponent, thereby leading to invalidation of his patent.
- A patentee is unable to pay the fee within the prescribed time
- In any other circumstances like inability to commercialize

Statutory basis and procedure for surrendering the patent

i.Online Notice and application of Surrender of Patents:

Section 63 of the Patents Act, 1970 provides that the patentee may, at any time by giving notice in the prescribed manner to the Controller, offer to surrender his patent. The official fees for providing such an application through online mode is Rs. 1000 /- for natural persons or startups or small entities or educational institutions and Rs. 5000 /- for others as mentioned in the First Schedule of the Patents Rules, 2003.

ii. Publishing the details of surrender

It is further provided in Section 63 that the Controller shall publish the offer for surrendering the patent in the prescribed manner (in the Journal), and also notify every person other than the patentee whose name appears in the register as having an interest in the patent.

iii.Opposition to surrender

If any person interested is aggrieved by the surrender offer, he may within three months from the date of publication of the notice by the Controller, give notice of opposition to the Controller in Form 14 in duplicate. The Controller shall provide an opportunity of being heard to the patentee as well as the opponent

Revoke : If the Controller is satisfied after the hearing that the patent may properly be surrendered, he may accept the offer and, by order, revoke the patent. An important provision while surrendering the patent is that there is no need for the patentee to give the reason or motivation for the offer of the surrender.

Surrendering the patent is a good statutory option available to the patentee to safeguard his financial interest prior to making an offer for the surrender. Any payment made under the patent prior to the date of the acceptance of the surrender application would not be put at risk and surrendering the patent would not adversely affect the continuance of the revocation proceedings in the court. However, the Controller may not proceed with the acceptance of the application till the outcome of the revocation litigation. In case the patent is revoked, it would mean that the patent would be deemed to have never existed and thus subjecting all the financial agreements made earlier at risk.

2.14 : Challenges in Patent/Emerging Issues in Patent

1. Patentability of Software: In the view of emerging trends and innovations in software, the patentability of the software is a challenging issue. Software can be patented only if it is attached to an invention and the software is a component of that invention. Computer programs are not patentable. Hence there is no clarity on patentability of the software.

2. Evergreening of Patents : Evergreening works by filing additional patents related to the original patent. This allows patent holders to extend the life of their inventions and protect them from competitors for longer periods of time. The process typically involves filing multiple follow-up patents that build off of the original patent in order to provide further protection for the invention. Evergreening is common in medicine patents which makes the medicines costlier and inaccessible to public

Examples Of Evergreening Of Patents

Apple Inc. regularly files multiple follow-up patents related to its core products such as iPhones and iPads in order to extend the life of those products' intellectual property protections over an extended period of time.

3. Cost of Patent services: While patent filings for individuals have increased to Rs 1,600 by 60%, those for large firms doubled to Rs 8,000 for every application filed with the Indian Patent Office. The patent agents charge a very higher amount around 1 lakh which prevents inventions

4. Delay in grant of patents: A patent application takes, on average, six years to get approved in India, As many as 98% of patents granted were for applications more than five years old.

Patents allow companies with innovative products to benefit from their research and development by giving them exclusive right to make these products, usually for a period of 20 years. If patent grants are delayed, the entry of companies into the Indian market with their product is delayed too.

5. Awareness Issues: Intellectual property is an emerging concept. The people in the developing and less developed countries are not aware of the intellectual property rights and its benefit. Lack of awareness among the public about the procedure and benefits related to intellectual property is a challenging task that need to be addressed.

6. Funding issues : The inventors are not able to find suitable funding platforms for their inventions to be patented. The idea conversion into patented product required financial resources. Very few organizations are available to fund the new inventions which prevents the growth of patents in India.

7. Patent leads to cooperation or competition; Profiting from innovation typically involves a choice between commercializing a patented technology in the product market to exploit proprietary advantage (i.e., competition) or licensing the technology to an incumbent in the market for ideas (a form of cooperation). .

UNIT–3:COPYRIGHT AND TRADE MARKS (9) Copyright: Definition – Copyright board registration in India – Ownership of copyright – Rights of the owner – Terms of copyright – Registration of copyright – Convention and UCC – Rights of broadcasting – International copyright – Infringement of copyright – Copyright Act, Amendment and Issues. Trademarks: Developing a Trademark – Trademark registration – Trademark applications – Procedure for trademark registration in India – Terms, assignment, transmission, certification, infringement of trademarks.

COPY RIGHTS:

Copyright: Definition :

Copyright provides protection to the expression of the idea as envisaged under the Copyright Act, 1957. As per Section 13 of The Copyright Act, 1957 "the copyright subsist in the following classes of work:

- Literary works
- Dramatic works
- Musical works
- Artistic works
- Cinematograph films; and
- Sound Recording

Copyright is a type of intellectual property right that protects the authentic work produced in areas of various arts. Under article 13 of the Copyright Act of 1957 such areas include:

- Literary work– The distinct creation of any work related to literature. They may be books of any sort- technical, novels, a work of fiction, research papers, articles, blogs including computer programs, and computer databases.
- Musical works-Musical works denote a musical piece that includes any pictorial notation but excludes any words or actions that are intended to be sung, spoken, or performed with music. The 'composer' is the author of the copyright in relation to 'musical works'. To make a sound recording, the author needs to take permission from the composer of musical works. The work must be written down in order to get registration of copyright.
- Dramatic works– Dramatic works refer to the representation or enactment of a certain plot in form of dramatics. They may include a play, recitation, acting based on a book, choreographed movements, etc.
- Artistic works-They refer to any uniquely created art interpretations which include paintings, sculptures, cartoons, graphics, drawings, diagrams, maps, and charts.
- Architectural works– Architectural works means the constructive models of a building, its designs and artistic character, etc. They do not specify the method of construction.
- Cinematograph films– Cinematograph shall be interpreted as embracing any work generated by any process equivalent to cinematography, including video films, and includes a sound recording accompanying such visual recording.
- Sound recordings– Any work of sound recording, regardless of its storage medium, is considered a Sound Recording. Sound recordings include songs that contain singers' voices with or without music, recorded speeches or sounds, and podcasts. If the sound recording also includes music, permission from the composer of the musical piece is required for the sound recording's Copyright protection.

Copyright board registration in India

The Copyright Board, a quasi-judicial body, was constituted in September 1958. The jurisdiction of the Copyright Board extends to the whole of India. The copyright board is a body constituted by the central govt. to discharge certain judicial function under the Act.

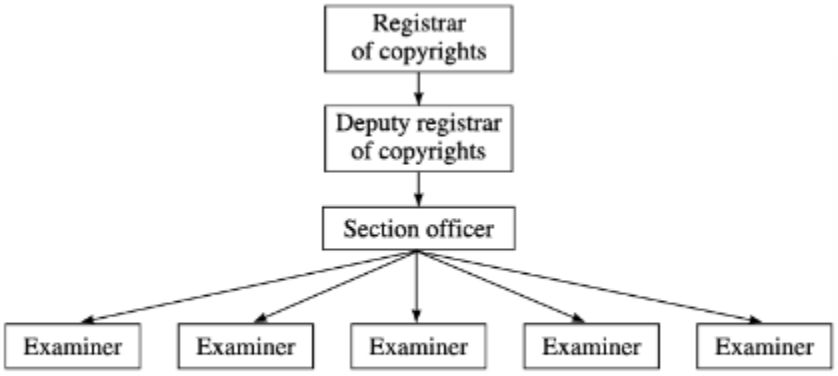
The Board is entrusted with the task of adjudication of disputes pertaining to copyright registration, assignment of copyright, grant of Licenses in respect of works withheld from public, unpublished Indian works, production and publication of translations and works for certain specified purposes. It also hears cases in other miscellaneous matters instituted before it under the Copyright Act, 1957

.The Registrar of Copyright also plays a very important role. The Registrar of the copyright board will perform all secretarial functions of the copyright board.

The Registrar of the Copyright is the authority under Section 9 of the Act who is the officer of the Copyright Office.

The Registrar of Copyright has powers of the civil court. [

And every order made by the registrar of payment of money is deemed as a decree of a civil court and is executed as decree of such court.



Source: http://copyright.gov.in

Figure 4.1 Organization Structure of Copyright Office, New Delhi.

Registration of copyright:

Under section 45 of the act, concerned proprietors can obtain copyright for their work by filling Application for Registration of Copyright accompanied with the prescribed fee to the Registrar of Copyrights.

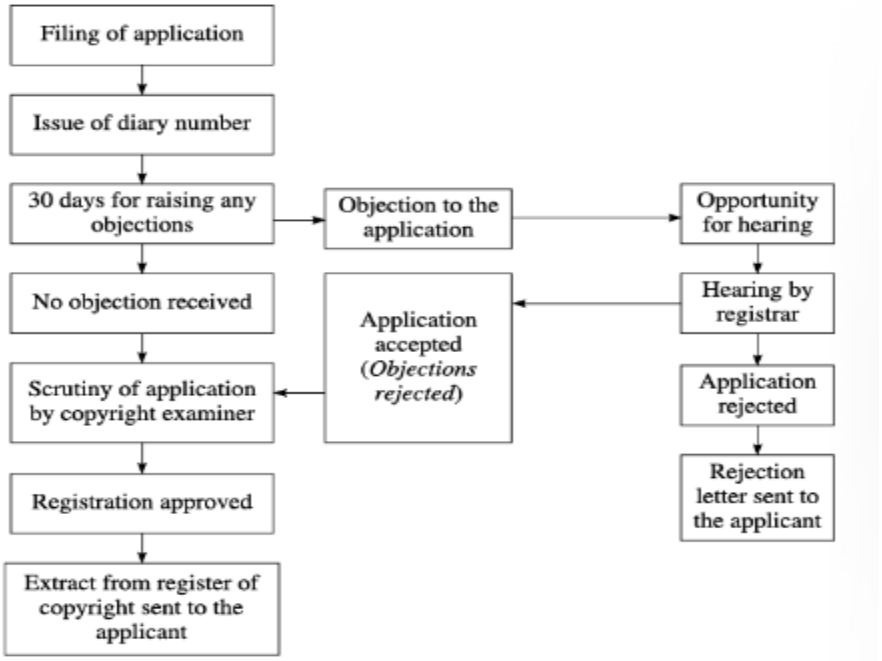


Figure 4.2 Process for Registration of Copyright.

- Filing Of Application– The first step of the registration procedure is to apply for an application. The application is sent to the DD or the IPO with all the prerequisite requirements as well as the prescribed fee concerning the respective category of the work.
- Issuance of Diary Number– After the application is filed, a diary number will be issued to the applicant.
- Waiting Period– A time window of 30 days is mandated for the applicant to analyze the emergence of any opposition.
- *If an objection is not raised*– If an objection does not arise against the copyright, it further is taken to an examiner for scrutinization to examine whether it satisfies the statutory requirements laid down under the Act and the rules.
- *If an objection is raised*– In case any opposition is faced by the respective copyright, an objection is filed letters are sent to both the objector and the applicant. A reply from both is awaited and when received, a hearing a held by the registrar. The discrepancies are then sorted which leads to the application being rejected/ accepted.

– If rejected, then an application rejected is sent to the applicant.

– If accepted, the objections are then rejected and the application further goes to the Copyright Examiner.

- Scrutiny by Examiner– The examiner then analyzes the application to see whether it complies with the Act's and rules' statutory requirements

- *If a discrepancy is found*– A discrepancy letter is sent to the applicant, who in turn has to send a reply to the letter. Afterward, a hearing is held by the registrar which holds to resolve the discrepancies.
- *If no discrepancy is found*– The application then is sent to check for the final approval.
- Approval of registration– After the resolution of discrepancies if any, the application finally is sent for the ultimate check of approval.
- *If the registration is approved*– The extracts are sent from the registrar to the applicant.
- *If the registration is rejected*– A rejection letter is sent to the applicant.

As the preceding procedures demonstrated, registration is dependent on the registrar. The applicant acquires the copyright and can lawfully exercise all rights that come with being the owner of that copyright once everything with the registrar is cleared.

Registration gives a sanction of legally established copyright and a lot of legal benefits. However, it is not mentioned in the copyright act that registration is mandatory for an action to be taken in case of infringement. It is better, if possible, to get the registration done as a measure of precaution.

Ownership of copyright:

The ownership for copyright lies with the original creator

- For literary or dramatic works, the author is the creator.
- For musical works, the composer holds authorship.
- For artistic works (except photographs), the artist is the author.
- For photographs, the photographer is the author.
- For cinematographic films, the producer is the author.
- For sound recordings, the producer is the author.
- For computer-generated works of literature, drama, music, or art, the individual commissioning the work is the author.

Literary, Dramatic & Artistic Work

This clause states that if an author creates a literary, dramatic, or artistic work while working for the owner of a newspaper, magazine, book, or other publication under a contract for publishing such work, the owner of such newspaper or magazine becomes the first owner of the copyrighted work, unless an agreement to the contrary is in place.

Illustration – A journalist or writer working in a newspaper house is never the owner of the work he produces; only authorship is his.

Photograph, painting, engraving, cinematographic film

This paragraph states that anytime a photographer is paid to take photographs, a painter is hired to paint, and a cinematographer is hired to shoot a film, the person who hired or caused such work to be done becomes the first owner of the copyright.

Illustration – A painter hired by a school to paint the school's boundary walls with storytelling paintings presenting social and moral values will not be the first owner of the paintings he made, but the school that hired the painter will be.

Work made under course of employment

This section states that if a work is made during the course of employment or a service contract, the employer becomes the first owner of such copyrighted work.

In another case of Neetu Singh vs Rajiv Saumitra, the court agreed that the defendant had served as a director of a company for two years, but the plaintiffs were unable to prove that the literary work authored by the defendant was part of his employment obligations.

Lectures delivered in public in behalf of another

This clause states that if a person provides a speech in public on behalf of another person, the person on whose behalf the speech was delivered is the original copyright owner, not the person giving the speech.

Work assigned by government

If a copyrightable work is created as a result of a government tender, the government will be the first owner of the copyright deriving from and accruing to such works.

For example, the Indian government owns the copyright on the "statue of unity," not the engineers or architects who designed or built it.

Work made on behalf of a public undertaking

In the absence of an agreement to the contrary, if a work is created or first published by or under the control or direction of a public undertaking, that public undertaking will be the original owner of Copyright.

Work of certain international organization

If an international organization commissions someone to create a copyrightable work on its behalf, that organization will be the original owner of the work.

Rights of the owner:

The rights of the owner varies with type of copyright which is mentioned below.

1. Literary Works

The works protected by **copyright law** include literary works that are original or uniquely created. Scripts, novels, biographies, theses, technical texts, and programs are only a few examples of these creative works. The Copyrights to these could be claimed regardless of the literary worth, writing style, or overall quality of the work. A literary work's copyright grants exclusive rights.

- To make variations of a work
- For a public performance of the work
- To distribute copies of work to the public
- For reproducing the work
- To translate the work

2. Artistic Works

These artistic works are protected by the Copyright Act of 1957 and include, among other things, paintings, photographs, buildings, diagrams, cartoons, moulds, plans, etchings, casts for sculptures, graphics, and sketches.

Exclusive rights provided by the copyright for these creative works are.

- To give way copies of the work to the public.

- To include artistic work in cinematographic films.
- To make any changes to work.
- For reproducing the original work.
- For making the artistic work reach the public.

3. Dramatic Works

Dramatic works refer to the portrayal or dramatic enactment of a specific plot. A drama, recitation, acting based on a book, coordinated movements, etc. may be among them. Cinematographic films of any kind are not included in this category of work.
Exclusive rights provided by the dramatic work's copyright are:

- For making any changes to the work
- To reproduce the work
- To comprise the work in any cinematographic film
- To make the work reach the public

4. Sound Recordings

Any audio recording, regardless of how it is stored, is a sound recording. Podcasts are examples of sound recordings, along with songs with or without music that feature vocalists. The authorization of the musical piece's composer is necessary for the sound recording's Copyright registration protection if it also contains music.
Exclusive rights granted by the copyright of sound-recorded works are:

- To provide the sale or hire of any copy of the sound recording
- For communicating the sound recordings to the general public
- To create any other recording that symbolises it

5. Musical Works

"Musical work" refers to a musical composition containing any visual notation. Still, it leaves out any actions or words meant to be sung, spoken, or performed in time to the music. The author of the copyright relation to "musical works" is the "composer." The author must obtain permission from the musical works' composer to record sound.
Exclusive rights granted under the copyright for songs in musical works in India are:

- For reproducing the musical work
- For reaching out the work to the public
- To make any kind of variation to the work
- To perform the musical work in the public
- To provide copies of the work to the public
- To make a sound recording or a cinematographic film in respect of the musical work

6. Cinematograph Films

Cinematographic films typically contain all previously created visual and moving image recordings. It is a kind of work that combines video films with audio recordings made using any method, whether analogue or digital; whatever way of maintaining such visual records is acceptable, as are visual recordings in any format.

The copyright under cinematograph film work grants exclusive rights

- To hire, sell, or offer a copy of the film.
- For allotting the cinematograph film to the public.
- For making a copy of the film or making any changes to it.

7. Architectural Works

Architectural works include a building's actual construction models as well as its designs and aesthetic features. However, they make no mention of the construction technique.

Terms of copyright :

Copyright is protected for a limited time. Economic rights have a time limit, which can vary according to national law. In those countries which are members of the Berne Convention, the time limit should be equal to or longer than fifty years after the creator's death. Longer periods of protection may, however, be provided at the national level.

Term of Copyright for Posthumous Publications

it is the publication of work after the death of its author. The term of copyright protection of a posthumous publication subsists for a period of sixty years and unlike in others, here such period is calculated from the date of publication.[6] ."

Term of Copyright for Anonymous Publication

If the publication of the work anonymously, that is, publication when the author of such work is unknown. The copyright term of an anonymous publication, as provided under **Section 23** of the Copyright Act, 1957, is also for a period of sixty years, calculated from the beginning of the calendar year next following the year in which the work is first published.

Term of Copyright for Photographs

The Indian Copyright Act provides for copyright in a photograph for a period of 60 years from the beginning of the calendar year, following the year in which the photograph is published.

Term of Copyright for Cinematograph Films

Copyright of Cinematograph Films[9] shall subsist until sixty years from the beginning of the calendar year next following the year in which the film is published.

Term of Copyright for Sound Recordings

Copyright of sound recordings[10] shall subsist until sixty years from the beginning of the calendar year following the year in which the sound recording is published.

Term of Copyright of government works

In the case of a Government work, where Government is the first owner of the copyright therein, copyright subsists until sixty years from the beginning of the calendar year next following the year in which the work is first published.[11]

Term of Copyright where a public undertaking is the first owner

In the case of a work, where a public undertaking is the first owner of the copyright therein, copyright subsists until sixty years from the beginning of the calendar year next following the year in which the work is first published.[12]

Term of Copyright of work of an international organisation

In the case of a work of an international organisation to which the provisions of section 41 apply, copyright subsists until sixty years from the beginning of the calendar year next following the year in which the work is first published.[13]

An author's moral right as a right against distortion is available even after the expiry of the term of copyright.

Convention and UCC:

Universal Copyright Convention, (1952), convention adopted at Geneva by an international conference convened under the auspices of UNESCO, which for several years had been consulting with copyright experts from various countries. The convention came into force in 1955.

NATIONAL TREATMENT

Each Berne member country automatically provides citizens from other member countries with, at a minimum, the same copyright protections it provides for its own citizens. This is the notion of national treatment.

For example, when you photocopy an article in Australia, you apply Australian law — even if that article originates from an American or British author/copyright owner. Similarly, if you show a French film in public in a U.S. theatre, you apply U.S. copyright law with respect to the right to perform a work in public.

AUTOMATIC COPYRIGHT PROTECTION

In Berne member countries around the world, copyright protection is automatic upon the creation of a work in a fixed form (i.e., once the work is in some sort of tangible form). This means that no registration or deposit with a government copyright office is required in order to have copyright protection.

There are, however, voluntary government registration systems where copyright owners can register their works, thereby gaining entitlement to certain benefits, especially in cases of copyright infringement of their works.

Similarly, the use of the copyright symbol isn't mandatory under the Berne Convention and by extension in its member countries. However, using the symbol — © — is always a good reminder to the public that copyright exists in a work.

COPYRIGHT DURATION

The duration of copyright is determined by the copyright statute in each country. In the U.S., Canada and in European Union (EU) countries, it's life-plus-seventy. Specific works and circumstances may result in deviations from these general rules of copyright duration.

Once copyright in a work has expired, that work is said to be in the *public domain* and anyone may freely use, adapt and reproduce that work.

EACH COUNTRY IS UNIQUE

Common rights found in copyright acts around the world include:

- Reproduction
- Adaptation and translation
- Performance in public
- Display or communication to the public

Rights of broadcasting ::
Broadcast reproduction right.-- (1) Every broadcasting organisation shall have a special right to be known as "broadcast reproduction right" in respect of its broadcasts.

(2) The broadcast reproduction right shall subsist until twenty-five years from the beginning of the calendar year next following the year in which the broadcast is made.

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(3) During the continuance of a broadcast reproduction right in relation to any broadcast, any person who, without the licence of the owner of the right does any of the following acts of the broadcast or any substantial part thereof,--

---

(a) re-broadcast the broadcast; or

(b) causes the broadcast to be heard or seen by the public on payment of any charges; or

---

(c) makes any sound recording or visual recording of the broadcast; or

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(d) makes any reproduction of such sound recording or visual recording where such initial recording was done without licence or, where it was licensed, for any purpose not envisaged by such licence; or

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[3][(e) sells or given on commercial rental or offer for sale or for such rental, may such sound recording or visual recording referred to in clause (c) or clause (d).]
International copyright :

Rights of a Copyright Owner
The name of the author or publisher that appears in the copies of dramatic, literary, artistic or musical work is presumed to be the author/copyright owner of the work. A copyright owner has the following rights in the copyrighted work:

- Produce the work in public
- Publish the work
- Perform the work in public
- Translate the work
- Make a cinematograph film or a record of the work
- Broadcast the work
- Make an adaptation of the work
- Make copies of the work and distribute them
- Prevent others from unauthorised usage of the copyrighted work

Copyright Infringement in India

As per the Copyright Act, 1957, the use of a copyrighted work without the permission of the owner results in copyright infringement. Infringement occurs when a third person unintentionally or intentionally uses/copies the work of another without giving credit. It is usually classified into two categories, i.e. primary and secondary infringement.

Primary infringement occurs when there is an actual act of copying, while secondary infringement occurs when unauthorised dealings take place, such as selling or importing pirated books, etc. In the case of secondary infringement, the infringer will know about infringement, while in the case of primary infringement, the infringer may or may not know about infringement.

The following elements should be present for copyright infringement:

- The copyrighted work is the original creation of the author
- The copyright infringement work is actually copied from the work of the author

Remedies For Copyright Infringement

The authors/copyright owners can take legal action against a person or entity infringing their copyrighted works. The copyright owner can file a civil case in a court having jurisdiction and is entitled to remedies by way of damages, injunctions and accounts. A criminal suit can also be filed in a court of a First Class Judicial Magistrate or Metropolitan Magistrate.

Civil Remedies

Injunction: Injunction is the effective remedy for copyright infringement. An injunction means a judicial process through which the infringer is restrained to continue the infringing acts or is ordered to restore the position which stood before the infringement.

Damages: Damages are compensation provided to the copyright owner. The purpose of ordering to provide the damages to the copyright holder is to restore the owner to the earlier position. There are various factors to determine the damage amount. Generally, the damages are the amount the copyright holder would have gotten from the infringing acts if the infringer had obtained the licence for such acts. Various other factors, such as loss of reputation, loss of profit to the copyright holder, decrease in the sale of the copyright holder's work, etc., determine the damages amount.

Accounts: The infringer can be asked to submit an account of profits made from the sale of the copied works and pay such an amount to the copyright owner.

Criminal Prosecution for Copyright Infringement

When a person knowingly infringes or abets the infringing act of a copyrighted work, then the offence is a criminal offence under the Copyright Act, 1957. When the copyright owner files a criminal suit for copyright infringement, the minimum punishment for the infringement is imprisonment for six months, which can extend to three years, with a minimum fine of Rs. 50,000, which can extend up to Rs.2 lakhs.

In the case of a subsequent and second conviction, the punishment is imprisonment for a minimum of one year, extending to three years and a fine of Rs.1 lakhs, extending to Rs.2 lakhs. Any police officer (not below the sub-inspector rank) can seize the infringing copies without a

warrant when the police officer is satisfied that a copyright infringement offence in any work has been committed and produce them before the Magistrate.
Copyright aims to protect the author's rights and provide them with economic benefits. The scope of copyright protection extends to all original works which demand creativity, including computer software and databases.

Copyright Act, Amendment and Issue

Effect of Copyright (Amendment) Act, 2012 on Copyright Societies

The Copyright (Amendment) Act, 2012 (2012 Amendment) came into force with the primary objective of establishing an equitable and just framework for administration of copyright and sharing of revenue to protect the rights of owners and authors incorporated in cinematography and audio recordings.

As a part of the 2012 Amendment, section 33(3A) was added, which laid down a new guideline that any copyright society carrying out the business of granting or issuing copyright licence must register itself again within the period of 12 months from the date of the amendment. Therefore, any copyright society which existed prior to the amendment has to re-register itself within the given time frame. Also, there was no punishment prescribed in case any copyright society fails to do so.

Problems with the Amendments in 2012 and 1994

There are always 2 sides of every coin. Though the attempt of government in the amendments was genuine, there are certain ambiguities that jeopardise the interest of non-author owners of a copyright in case of creative works. Section 33 which was inserted by the 1994 Amendment mandated only the copyright societies to carry in the business of "issuing or granting licence" for creative works. But, it does not say anything about the copyrightable work. Also, it has to be taken into consideration that Section 18 of the Act says that the owner of creative work can assign the copyright to any "person".

Therefore, an owner or author has the right to assign his copyright to a production company and also has the right to assign it to any other person at the same time. So, in such a process, forming a copyright society is not necessary. However, a specific bar is created by Section 33 on any other person or entity who may be assigned any such right as stated in Section 18 to issue these licence as a copyright author or owner of a copyrightable work. The ambiguity is that only a copyright society has the right to get involved in business of issue of licence by virtue of Section 33, even when under Section 30 the copyright owner has the valid right licence a work. Section 30 and 18 are provisions of the act since it came into existence. The impact on these sections by Section 33 which was added later has not been clarified either by the statue or any of the amendments. It is still ambiguous as to whether Section 18 and 30 will prevail over Section 33 or not, this ultimately leads to high legal ambiguity while deciding the matters by the courts.

It is a mandatory for the production companies in the music and film industries to engage third parties for collecting and licensing and for collecting public performance licenses as well for collection of fees in that respect. Alternatively, there is an option to assign, in terms of Section 18, public performance rights to third-party collecting and licensing bodies who can monitor such right so as to ensure that no infringement of any copyright is done by the non-owners. The third party due to their specialization in such activities make sure that no infringement in any form is done in country like India with such a massive population.

A fine example of such a scenario is the case of Novex Communication (P) Ltd., a company, which as per its website, in terms of Section 30, is holding authorization as agents or is assigned with rights under Section 18 for administration of copyright and licensing purposes.
There is a presence of legal vacuum upon the interests of the third party licensing entities carrying out the work of issuing and granting license in respect of creative works. The 2012 Amendment might have clarified the position with regard to the same but it has only added up to the ambiguity by providing a new sub-section (1) of Section 33. Now, according to this section, only a copyright society can carry out the work of business of granting license for issuing or granting of any copyright with respect to any dramatic, artistic, literary musical or artistic work incorporated in a film or sound recording. This proviso leaves bodies like Novex on an uncertain footing legally.

TRADE MARK
A trademark is a word, phrase, symbol, or design that helps distinguish the source of the goods of one party/organisation from that of others.

Trademark is defined in the Trademark Act, 1999 as, "trademark means a mark capable of being represented graphically and which is capable of distinguishing the goods or services of one person from those of others and may include the shape of goods, their packaging and combination of colours."

DEVELOPING TRADEMARK:
Developing an effective and eminent strategy ought to be the be-all and end-all of any company. A well-considered trademark strategy will emphasize the uniqueness of the goods and services of the company. It should be distinct, definable, and recognisable.
Here are some key points for developing your trademark strategy:

1. SELECTION OF A RIGHT TRADE MARK:
A trademark search must be conducted before filing a trademark application to identify potential with existing trademark applications and even registered trademarks. A trademark search can be performed by entering the word mark and the class in which the investigation is conducted. If a similar trademark exists, the newly applied Trademark should be changed, or a new name can be chosen. If the brand name is unique, it is possible to register
The process of brand trademark registration in India is now possible and convenient through the trademark registration portal with one of the below things or even a combination of the following:
– Letter
– Word
– Number
– Phrase
– Graphics
– Logo
– Sound Mark
– Smell or a mix of colors

2. MAKING RIGHT CHOICE :

Choosing a good trademark is very important for any business. We have to consider many points in choosing a good trademark.

- It should be easy to speak, spell, read and remember.
  Eg. Tata, Puma, Adidas
- Avoid selecting a trademark that is identical to other trademarks in the same line of business. However, you may select a trademark that is similar, but not confusingly similar.

- Do not select trademarks that are similar to well-known trademarks.
  Eg.Tata, Sony, Honda, Google,etc.

Step 3: REGISTRATION:

- The registration process in India is a 'first to file' basis. Therefore, it is important to apply for registration as soon as possible. A trademark usually takes 2-3 years to get registered, if the trademark is not being opposed by a third party[1]. Trademark applications are handled by the Office of the Controller General of Patents, Trade Marks,
- Within the term of three months publication in the Trademarks Journal, if not opposed by a third party, the trademark will proceed for registration and the trademark authority will proceed to give a registration certificate.

TYPES OF TRADEMARK:

The different types of trademarks as provided by the Trademark Act in India are as follows:

- **Product Mark**
- **Service Mark**
- **Shape Mark**
- **Certification Mark**
- **Pattern Mark**
- **Sound Mark**

1) Product Mark

One of India's most substantial types of trademarks is the Product mark. It is a mark linked to the products or goods, but it does not include services. The use of product marks is to recognize the source of a product and differentiate the products manufactured and sold by one person from the others. Trademark safeguards the status and goodwill of the business. It is done under the Trademark Act.

A symbol of TM can be used once the application is filed and the registration is under process.

2) Service Mark

A Service mark is a mark linked to the services and not the products or goods. A service mark is used to recognize the source of assistance. A service mark differentiates the services of one person from that of another. It For example, companies offer software assembly, computer hardware, beauty and health care services, etc.

3) Collective Mark

The mark used by the group of companies and protected by the group collectively is termed collective marks. The effect is used to represent or inform the public at large about the unique

idea of the product. It is used to promote certain products with specific characteristics in that field. Such kind of mark is registrable under the Trademark Act.

4) Certification Mark

A mark used to indicate the particular goods or services are certified by the owner of the sport in terms of material, origin, quality, or any other characteristics is termed a certificate mark as given under the Trademark Act. Eg:ISO

5) Shape Mark

A mark used to indicate the shape of goods, their packing, etc., are termed Shape Mark as provided by the Trademark Act. It is used only when it is likely to present the product's shape. These shape marks make it different from the other products. If the form has some distinctive features, such effects can be registered under the Trademark Act.

6) Pattern Mark

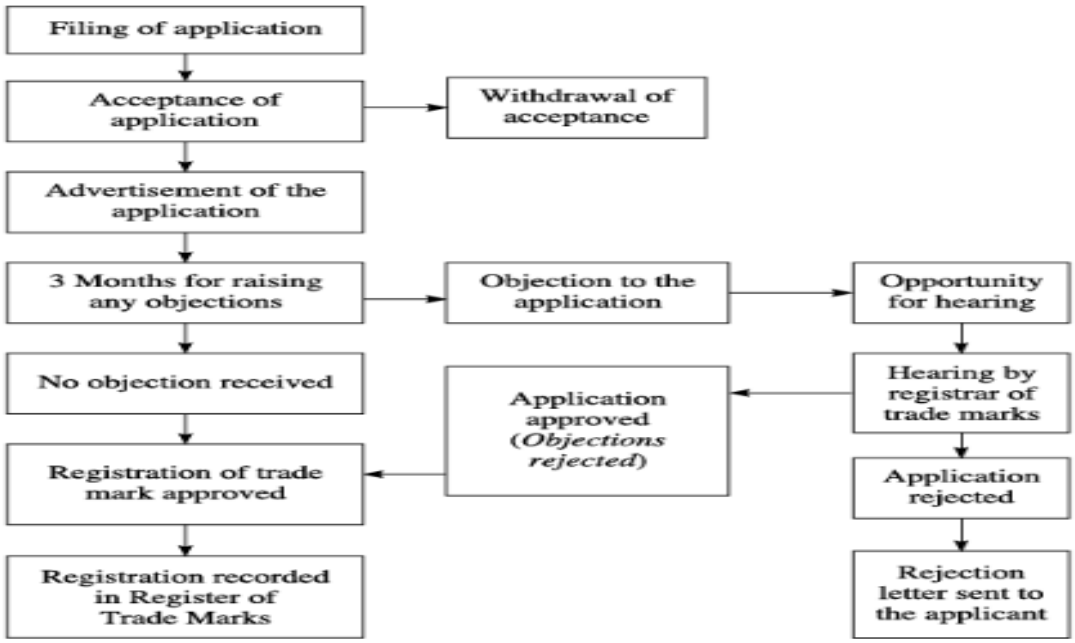
A mark that comprises a pattern capable of identifying the product or services that originate from a particular undertaking and can be distinguished from the other project can be termed the Pattern Trademark as provided by the Trademark Act. The method of evaluation is similar to other trademarks.

7) Sound Mark

A sound mark is a mark used when a specific sound performs the purpose of uniquely classifying the source of a product or a service; it is termed a sound mark. In such cases, such sound is connected with a company or its products or services. It is provided by the Trademark Act.

PROCEDURE FOR REGISTRATION OF TRADE MARK:

The process to get a trademark registered involves filing of the trademark registration application, examination of the trademark, publication or advertisement of the trademark, opposition (objections) if raised/ found, registration of the trademark and renewal of the trademark after every 10 year



Step 1: To file the trademark application : The application for registration of the trademark can either be filed in a single- class or a multi- class totally depending on the goods and services the business pertains to. . The application for trademark registration has to be supported with multiple documents with complete details of the trademark for which the registration is sought.
. Step 2: Acceptance of application: The application is examined and being accepted for further process if all conditions are fulfilled. In case if conditions are not fulfilled the application may not be accepted or sometimes the applicant also may with draw the application based on the trademark search.
Step 3: Advertisement of the trademark : Once the registration application has been accepted, the said trademark is advertised and also published in the Trade Marks Journal for a period of 4 months. The aim behind the publication and advertisement is to invite the general public to filing an opposition against the registration of the mark.
Step 4: Opposition from general public Post the advertisement and publication of the trademark in the journal, any aggrieved person can file a notice to oppose against the registration of the advertised/ published trademark. This notice to oppose the trademark has to be filed within 3 months of publication in the Trademark Journal. In case the applied for trademark is opposed/ objected, then the due process of law has to be followed which includes filing the counter-statement application, evidence as well as hearing in order to get the trademark registered.
Step 5: Handling objections: If the trademark registration application is objected by the Trademark Officer, the trademark applicant has the right to appear before the Trademark Officer and address the objections.
If the Trademark Officer is satisfied with the justifications of the trademark applicant, the trademark would be allowed for trademark journal publication.
In case the Trademark Officer is not satisfied with the justifications, the trademark applicant has the right to appeal the decision of the Trademark Officer before the Intellectual Property Appellate Board.
Step 6: Registration of the trademark : The final step towards the entire procedure is registration where the application proceeds to registration after conquering the objection and/ or the opposition against the said registration of trademark. Besides this, in case there has been no objection against the registration of the trademark during the advertisement/ publication period of 3 months, then the trademark is issued an auto- generated registration certificate . Once the registration complete, it is valid for a period of 10 years after which it would be required to be renewed within a prescribed time period

ASSIGNMENT AND TRANSMISSION OF TRADEMARK
Assignment and transmission of a trademark refer to the legal process by which the ownership rights of a trademark are transferred from one person or entity to another. This process involves the transfer of the exclusive rights associated with the trademark, which can include the right to use, license, sell or enforce the trademark.
Assignment : The assignment of a trademark involves the complete transfer of ownership from one party to another. In this case, the assignee (the party receiving the trademark rights) assumes full control and responsibility over the trademark, including the right to use it exclusively for their own commercial purposes. The assignor (the party transferring the trademark rights) relinquishes all rights and interests in the trademark.
Transmission: On the other hand, the transmission of a trademark typically refers to the transfer of ownership rights in situations where the original owner passes away or there is a change in the

ownership due to legal proceedings, inheritance or other circumstances. Transmission may occur through the distribution of assets in a will, the settlement of an estate or a court order.

TYPES OF ASSIGNMENT & TRANSMISSION:

- Complete Assignment or Transmission
- Partial Assignment or Transmission
- Assignment with goodwill
- Assignment without goodwill

Complete Assignment and Transmission

Complete Assignment refers to the transfer of all rights associated with a trademark from one individual to another. This includes the rights to further transfer the trademark, receive royalties and exercise full control over its usage. For instance, if proprietor 'X' sells all rights of a trademark to proprietor 'Y', 'Y' becomes the exclusive owner with the freedom to use the trademark as desired, transfer it to others, set guidelines for its usage and receive royalties. No approval from 'X' is required in this case.

Partial Assignment

Partial Assignment involves the transfer of ownership restricted to specific services or products. For example, if proprietor 'X' has a trademark (♛) related to men's lifestyle products but only wants to assign it to shoes, 'X' can transfer the trademark to 'Z' with the condition that 'Z' can only use it for shoes. 'X' retains the right to use the trademark for all other products. This type of transfer is known as a partial assignment.

Assignment with Goodwill

Assignment with Goodwill refers to the transfer of a trademark along with all the associated rights and values from one person to another. For instance, if 'X' assigns and transfers their trademark (♛) to 'Z' with all rights and values intact, 'Z' gains full rights to use the trademark for men's lifestyle products or any other future products they manufacture.

Assignment without Goodwill

Assignment without goodwill involves the transfer of a trademark in a way that allows its use for purposes other than the original one. For example, if 'X', who deals with men's lifestyle products, assigns and transfers their trademark (♛) to 'Z' with the condition that 'Z' can use it for any product except men's lifestyle products.

Essentials of Assignment:

Section 42 of the Trademark Act outlines the conditions for the assignment and transmission of a trademark,. The following are the essentials of assignment

- The trademark assignment must be in writing.
- The assignment must have the following two identifying parties-
    1. An assignor (owner of the trademark); and
    2. An assignee (buyer of the trademark).
- The assignor must have the intention and consent for the trademark assignment.
- The trademark assignment must be for proper adequate consideration

Difference between assignment and transmission

erms	**Assignment**	**Transmission**
Definition	Transfer of ownership rights from one	Passing of rights to a third party while

	party to another	retaining ownership
Ownership	Ownership of the trademark is transferred	Ownership of the trademark remains with the original owner
Rights	Full or partial rights depending on the terms and conditions	Restricted rights granted to the third party
Goodwill	Can be with or without the goodwill of the business	Can be with or without the goodwill of the business
Registration	Assignment of a registered trademark requires registration	Transmission can be of a registered or unregistered trademark
Legal Proof	Acts as legal proof in case of disputes or challenges	Acts as legal proof in case of disputes or challenges

CERTIFICATION OF TRADE MARK:

Certification marks are essentially trademarks that are used to certify that the goods or services on which they are affixed comply with certain quality standards prescribed by a certifying entity. Such certifying entities, upon the fulfilment of these quality standards, license the certification mark to be used. By indicating that certain standards are met (eg, in respect of origin, material, mode of manufacture of goods or performance of services, quality or accuracy) a certification mark plays the crucial role of instilling legal assurance and acts as evidence that such goods or services are up to certain standards and quality. Due to its characteristic of essentially instilling confidence among consumers, a certification mark is often referred to as a "mark of validity" or a "mark of assurance".

A certification trade mark shows consumers that a product or service meets a standard or has a particular characteristic attributed to it. For example, your mark may indicate that the product or service:

- meets a certain standard of quality;
- is made of particular materials;
- has been made in a certain way; or
- is from a particular location.

Certification Marks Issued for Different Products

The following are the most famous State enforced (statutory) **certification marks issued for different products in india**, informed here to help the people and economic entities concerned:

- **BIS Hallmark:** --- Issued by the Bureau of Indian Standards (BIS), this **BIS Hallmark** certification is a hallmarking system for the certifying the purity and standard of precious metals like gold and silver and jewelries of these in entire India. This BIS hallmark has been in use since 2000 for gold and its jewelries, and since 2005 for silver and its jewelries. Here, it may be noted that BIS is the national standards organization of India.
- **AGMARK: --- Agmark certification** mark is exclusively used for various agricultural products in India, and fortifies that those products duly and strictly conform to a certain set of related standards. This certification mark is issued by the Directorate of Marketing and Inspection, Govt. of India, and has been in legal force as per the Agricultural Produce (Grading and Marketing)

Act of 1937 (including amendment in this in 1986).At present, the AGMARK standards cover quality guidelines for 213 different agricultural goods and commodities which encompass diverse pulses, vegetables and fruits, cereals, vegetable oils, essential oils, and some semi-processed products like Vermicelli. In addition to the 'Central AGMARK Lab' located in Nagpur, there are State-owned Agmark laboratories in 11 nodal cities across India.

- **ISI Mark:** ---ISI is the certificate from Indian standard Insttitue. This **ISI certification mark** is mandatory for various standard industrial products, and has been effective since 1955.
- **ISO:** ISO certification is a seal of approval from a third party body that a company runs to one of the international standards developed and published by the International Organization for Standardization (ISO).
- **BS:**

British Standards (**BS**) are the standards produced by the BSI Group which is incorporated under a royal charter and which is formally designated as the national standards body (NSB) for the UK.[1]

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INFRINGEMENT OF TRADEMARK:

Infringement occurs when other person uses a trademark that is same or similar to registered trademark for the same or similar goods/services.

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Grounds Of Infringement:

According to Section 29 of the Trade Marks Act, 1999, the followings are the grounds to trademark infringement in India:

- If the unregistered mark is identical to a mark registered for similar goods and services.
- The similarity of an unregistered mark with the infringed mark is likely to create confusion in the minds of consumers.
- The unregistered mark is similar to a registered trademark having a reputation in the market.
- The registered trademark is used on labelling or packaging without authorization.
- The registered trademark is used in advertising, taking unfair advantage detrimental or against the reputation of trademark.

Remedies Of Trademark Infringement:

The proprietor of the Registered Trademark can initiate legal proceedings against the infringer by stating the unfair business practices. The Indian Trade Marks Act, 1999 provides for both civil and criminal remedies for trademark infringement against the unauthorized use of its limitation by the third party.

a.Civil remedies in form of Injunction: An injunction's role is defined as preventing one individual from carrying out a specific action or task through the judicial process. In simple terms, an injunction is a Court order that prohibits a party from taking certain actions such as continuing sales of an infringing product. An injunction can completely bar the unauthorized use of the trademark by a party through the judicial process. The Court grants protection to the owner of trademark through a temporary or permanent injunction.

b. Civil Remedies In Form Of Damages:

Damages are the monetary compensation for the loss incurred by the trademark owner as a result of trademark infringement. Under this remedy, the monetary value of a financial loss or brand impairment is recovered. The court will determine the amount of damages after examining the owner's actual and prospective losses as a result of the infringement.

c. Criminal Remedies:
A Criminal Complaint can also be filed against the person infringing the trademark. The Indian Trade Marks Act, 1999 describes that the registered owner of the trademark has a chance to file the FIR through police on the infringer and accordingly the infringer can be punished with the imprisonment for a period not less than six months that may extend to three years and with a fine of INR 50,000 that may extend to INR 2 lakh.

Case Laws On Trademark Infringement:
Coca Cola Vs. Bisleri International Pvt Limited & Others: The defendant (Bisleri International Pvt Ltd) by agreement transferred trademark rights of MAAZA to the plaintiff (Coca-Cola Company) and also gave away the formulation rights, IPR, and know-how along with the goodwill for India for bottling and selling a mango fruit drink – MAAZA to Coca Cola.

In 2008, the defendant subsequently filed an application to register trademark "MAAZA" in Turkey and begin exporting the same fruit drink under name "MAAZA". Coca Cola claimed a permanent injunction and infringement damages for passing off and trademark since it was given to them by Bisleri.
The Hon'ble Delhi High Court in this case upheld the injunction against defendant "Bisleri" for using trademark "MAAZA" and passed an interim order of permanent injunction to prevent the plaintiff from irreparable loss and injury.

Industria De Diseno Textil Sa Vs Oriental Cuisines Pvt Ltd And Ors, Popularly Known As Zara Fashion Vs. Zara Food:
In this case, renowned fashion brand ZARA filed a suit for infringement and passing of their well- known brand ZARA against a restaurant "ZARA TAPAS BAR".

The Delhi High Court ruled out in favour of the renowned fashion brand ZARA, ordered the restaurant to change its name.

UNIT–4: GEOGRAPHICAL INDICATION, INDUSTRIAL DESIGN AND IC LAYOUT (9)
Geographical Indications: Concept, historical perspective, potential benefit, renewal and status of Geographical Indications – Geographical Indications in India – Infringement of GI – Status of GI registration in India. Industrial Designs and IC Layouts: Registration of Industrial Designs – Copyrights in Industrial designs – Terms, procedure and conditions for Industrial Designs – Infringement of ID – Integrated circuit layout design – Trade secrets.

CONCEPT OF GEOGRAPHICAL INDICATION

Geographical Indication (GI) is a sign used on a product that originates from a specific geographical location.

Geographical indication protection extends to a wide range of products including, but not limited to:

- Agricultural Products
- Handicrafts
- Industrial Products
- Foodstuffs
- Wine and Spirit Drinks

First, it identifies the goods as to the origin of a particular region or locality;

Secondly, it suggests to consumers that goods come from a region where a given quality, reputation, or other characteristics of the goods are essentially attributed to their geographic origin;

Third, they promote the goods of producers of a particular region.

Types of geographical indication

The geographical indications have been classified into four types, namely-

- Quality-neutral geographical indications,
- Qualified geographical indications,
- Direct geographical indications, and
- Indirect geographical indications.

Quality-neutral geographical indication

There is no apparent connection between the distinctive features of the products and the place of their origin for the quality-neutral geographical indications. It merely demonstrates that the product is made at the indicated location by the source indication.

Qualified geographical indication

The qualified geographical indications establish a link between the attributes or reputation of the products and the nation, area or place that they are concerned with. A single name is used to designate or identify these products. These are often referred to as applications of origin.

Direct geographical indication

The products of geographical indication tags for the direct geographical indications are denoted by the names of the geographical places they belong to.

For example, tea from Darjeeling is referred to as Darjeeling tea, and champagne from the place Champagne is famously known as champagne.

Indirect geographical indication

If the public at large believes that the products are identifying a certain geographical origin, the indirect geographical indications are termed “non-geographical names or symbols”.

For instance, consider the term “feta,” which has no geographical place in Greece but is yet claimed by Greece to be associated with a region and protected by geographical indication law. Another example is the rice variety known as “Basmati,” which has no specific location in India. The Trade Agreement on Intellectual Property Rights covers “other signs of geographical significance, whether… composed of words, phrases, symbols or emblematic images,” in the event that indirect geographic indicators are recognised.

HISTORY OF GI IN INDIA:

The history of GI in India is as follows

Early Period:

Right from the medieval period, when there was no proper legal protection for trade, products based out of geographical regions were famous. People from Europe and other parts of the world wanted to acquire those products because of its regional characteristics, such as spices from India and tea from China. Initially, GI was not protected in India.

TRIPS :

One of the most important and significant milestones in the development of the protection of Intellectual Property Rights, especially with respect to geographical indications was the TRIPS Agreement. The TRIPS agreement can be considered as a revised and updated version of all the international agreements. India as a member of World Trade Organization implemented the act for protecting Geographical Indications

Geographical Indications of Goods (Registration & Protection) Act, 1999 (GI Act):

India introduce the Geographical Indications of Goods (Registration and Protection) Act, 1999? It was due to three controversial cases related to neem, turmeric, and basmati. The act prohibit unauthorised persons from misusing geographical indications and to protect consumers from deception,

'Geographical Indications of Goods (Registration and Protection) Rules, 2002 (GI Rules).: The rules relating to GI registration and protect ion was framed and implemented in the year 2002.

First GI: Darjeeling Tea : Darjeeling tea was the first product that got a GI tag in India in 2004–05. Till now around 365 products have been added to the GI list. Recently Kashmir saffron and black rice of Manipur got the GI tag. Read this article to know the full list of GI tagged products in India.

Geographical Indications of Goods (Registration and Protection) (Amendment) Rules, 2020 :

The act was amended in the year 2020. One of the highlights of the amendment is that it will further strengthen the Intellectual Property Ecosystem as it has reduced the fees to be paid for the GI registration process and has further eased the procedure for registration of an authorized user of the registered geographical indication.

REGISTRATION PROCESS:

The registration process for GI is as follows

STEP 1 : Filing of application

The association of persons or producers or any organization or authority should represent the interest of producers of the concerned goods and should file an application for geographical indication registration.

Application must be made in triplicate.

The application shall be signed by the applicant or his agent and must be accompanied by a statement of case.

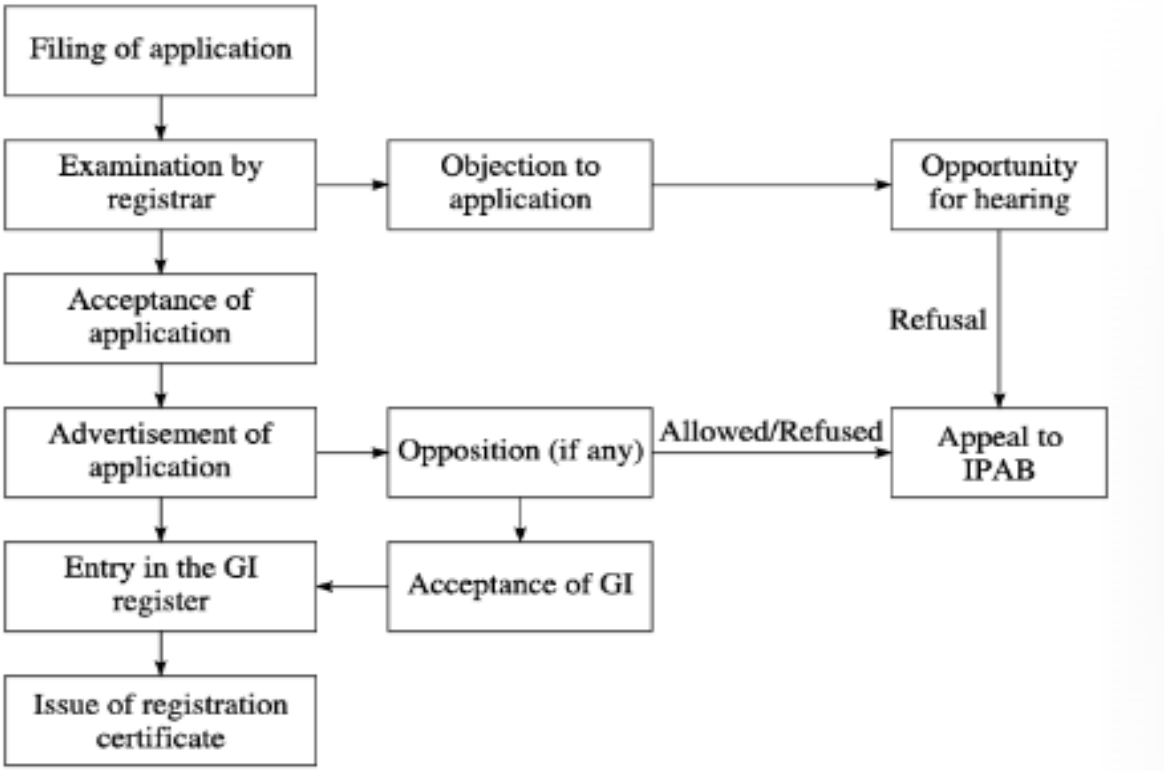

Figure 7.1 Registration Process of GI.

STEP 2 and 3: Preliminary scrutiny and examination
The Examiner will scrutinize the application for any deficiencies.
The applicant should within one month of the communication in this regard, remedy the same.
The content of statement of case is assessed by a consultative group of experts will versed on the subject.
The will ascertain the correctness of particulars furnished.
Thereafter an Examination Report would be issued.
STEP 4: Objection to application
If the Registrar has any objection to the application, he will communicate such objection.
The applicant must respond within two months or apply for a hearing.
The decision will be duly communicated. If the applicant wishes to appeal, he may within one month make a request.
The Registrar is also empowered to withdraw an application, if it is accepted in error, after giving on opportunity of being heard.
STEP 5: Publication in the geographical indications Journal
Every application, within three moths of acceptance shall be published in the Geographical Indications Journal.
STEP 6: Opposition to Registration

Any person can file a notice of opposition within three months (extendable by another month on request which has to be filed before three months) opposing the GI application published in the Journal.
The registrar shall serve a copy of the notice on the applicant.
Within two months the applicant shall sent a copy of the counter statement.
A date for hearing of the case will be fixed thereafter.
STEP 7: Registration
Where an application for a GI has been accepted, the registrar shall register the geographical indication. If registered the date of filing of the application shall be deemed to be the date of registration.
The registrar shall issue to the applicant a certificate with the seal of the Geographical indications registry.

Benefits of GI
Many people and associations across the globe often get confused while thinking about whether it is worthwhile to obtain GI protection or not. Some of the benefits of registering a geographical indication are as follows, which will help you in understanding its importance.

1- ENHANCES ECONOMIC GROWTH
2- PREVENTS UNAUTHORIZED USE OF GI TAGS
3- EXPANDS BUSINESS
4- INCREASES TOURISM

1- ENHANCES ECONOMIC GROWTH
The protection of geographical indications leads to the overall economic prosperity of the manufacturers and producers. Furthermore, the marketing and promotion of the products with the GI tags enhance the secondary economic activities in that specific region, which in turn boosts the regional economic development. Last but not least, the protection of geographical indications creates a positive image and reputation of the product in the minds of the consumers and rewards the producers with incentives and better ROI.

2- PREVENTS UNAUTHORIZED USE OF GI TAGS
The registered holder of the GI tag has all the legal rights to prevent anyone not belonging to the GI region from using their GI tags. The owners can also initiate legal proceedings against the unauthorized user to save their reputation from being damaged.

3- EXPANDS BUSINESS
The prime purpose of registering a geographical indication is to seek protection for specific products produced in a particular geographical region, which further encourages and motivates the marketers to expand their business at a global level. Furthermore, the protection of geographical indications boosts exports and helps the producers in earning well for themselves.

4- INCREASES TOURISM
The protection of GI tags builds a global reputation for the products. People around the world notice various GI products from different regions and get motivated to visit those regions and use such products. Therefore, it helps in the growth of the tourism industry of that particular region as well.

RENEWAL AND STATUS OF GI:

The registration of a geographical indication shall be for a period of ten years, but may be renewed from time to time in accordance with the provisions of this section.

REGISTRATION: An application for registration of the Geographical Indication can be made by an association of persons or producers or any organisations or authority established by or under any law for time being in force; who must be representing the interest of the producers of the concerned goods; and desirous of registering a geographical indication in relation to such goods."

AUTHORIZED USER:

An authorised user is a person who has been registered as such under **Section 17** of the Geographical Indications of Goods (Registration and Protection) Act,1999 act. A producer of the goods in respect of which geographical indication has been registered is eligible to register himself as an authorised user.

In order to register oneself as an authorised user, the producer needs to provide a statement and other documents of facts which would allow the registrar to ascertain the veracity of their claims. The registration of an authorised user is valid for 10 years, or till the date on which the registration of the related geographical indication expires.

REGISTER: Where an application for a **GI** has been accepted, the **registrar** shall **register** the geographical indication.

RENEWAL :

A registered Geographical Indication shall be valid for 10 years and can be renewed on payment of renewal fee.

- At the time before the expiration of last registration of geographical indication, the Registrar shall send the notice to the registered proprietor or the authorised user as the case may be, about the date of expiration and the conditions as to payment of fees and upon renewal of which registration shall be obtained.
- Failure to do so may result in removal of geographical indication
- Where a geographical indication has been removed by the Registrar on grounds of non-payment of the renewal fees may after six months and within period of one year from the expiration of last registration of geographical indication may, on an application in a prescribed manner and after payment of prescribed fees may restore the geographical indication for period of 10 years from the expiration of last registration

Status of GI in India

As of March 2025, India had registered 658 Geographical Indication Products.

Registration of GI's began in the year 2004-05 after the above mentioned law came into effect in 2003.

Darjeeling Tea of West Bengal was the first product to receive the GI tag in India. Both the product and the logo received the GI tag.

Some of the Examples of Indian geographical indications which are registered in India are:

Basmati rice
Darjeeling tea
Banaras Brocades and Sarees
Coorg orange
Phulkari
Kolhapuri chappals

Kangivaram sarees
Agra Petha

INFRINGEMENT OF GEOGRAPHICAL INDICATIONS

A geographical indication is also violated by a person who is not a registered proprietor or authorized user, who uses another geographical indication for the goods, which is actually true as to the region, or locality from where the goods originated and publicly misrepresentation that goods originate in a region, or a locality to which such registered geographical indicators belong.
According to Article 22.1of the GI Act, "A registered GI is infringed by a person who not being an authorised user .
Therefore, it is illegal to use a registered geographical indication if someone-

- uses the product's geographic indicator to suggest in a way that deceives the public that the items are made somewhere other than where they really originate,
- makes use of the geographic indication in a way that would be considered unfair competition,
- uses a different geographical indication for the commodities in a way that deceives the public into believing that the items are made in the area, region, or place that is associated with the registered geographical indication.

The reasons behind infringement are

Unauthorised Use
Passing Off
False Representations

REMEDIES FOR INFRINGEMENT

Civil Remedies

- Injunction
- Damages
- Delivery Of The Infringing Labels And Indications Containing Products

Criminal Remedies(Falsification And Misrepresentation)
six months to three years imprisonment and a fine of not less than rupees fifty thousand but may extend to rupees two lakh

Remedies relating to infringement of geographical indications are similar to remedies related to trademark infringement. Similarly, under the (Indian) Geographical Indicators Goods (Registration and Protection) Act, 1999, falsification of a geographical indication. Remedies which are available for conservation of geographical indications may be broadly classified into two categories:
(i) Civil remedies

Injunction

Injunctions include temporary injunction and permanent injunction. An injunction is granted for the protection of violations of related items, documents or other evidence in respect of the subject of the suit.

Damages

The remedy of damages or account of profits in the form of compensatory damages is available to prevent infringers from infringement. Damages (other than nominal losses) or accounts of profits may be ruled out

Delivery of the infringing labels and indications containing products

It is in the court's discretion to order the infringer to deliver up infringing labels and indications for destruction by taking relevant circumstances into consideration the court may or may not order for such remedy.

(ii) Criminal Treatment.

Criminal remedies are more effective as compared to civil remedies because the former can be disposed of quickly. Pendency of civil suits does not justify a stay of the criminal proceedings which involve the same question. Criminal proceedings directly attack the violator's honour and social status In some cases he comes forward for the Settlement of the matter out of court to save their reputation. Criminal action is taken in the case of following reasons:

- Falsifying and incorrectly applying geographical indications to the goods.
- Selling goods to which false geographical indications apply.
- Misrepresentation of a geographical indication in registered form.
- Improperly describes a place of geographically connected business indication Registry.
- Falsification of entries in the register.

The punishment granted for the infringement offences varies from six months to three years imprisonment and a fine of not less than rupees fifty thousand but may extend to rupees two lakh. However, the court for adequate and special reasons in writing may grant lesser punishment.

Cases

Banganapalle Mango

'King of Fruits' means mangoes from Banganapalle received a G.I. tag in the year 2017. The government-fixed logo features a yellow-coloured shiny fruit around which the tagline says "Banglapple Mango from Andhra Pradesh," showing farmers with images of a man and a woman. From now on anyone has to apply to become the first authorized user to sell or produce and this will require a No Objection Certificate (NOC) from the Commissioner of Horticulture Development Agency, Government of Andhra Pradesh, Department of Horticulture.

The fruit is also known by many types of sages such as Beneshan, Banahan, Benishan, Chapati, Safeda, Banganapalli, Banginapalli, Banganapalle, etc. The main attraction of the fruit is that it can maintain its quality in cold storage for three months. Documents submitted to the Registry stated that 'the prominent feature of Banganapel mangoes is that they have very light spots on their skin, stones are diagonal in shape and have very thin seeds, which have sparse and soft fibres.

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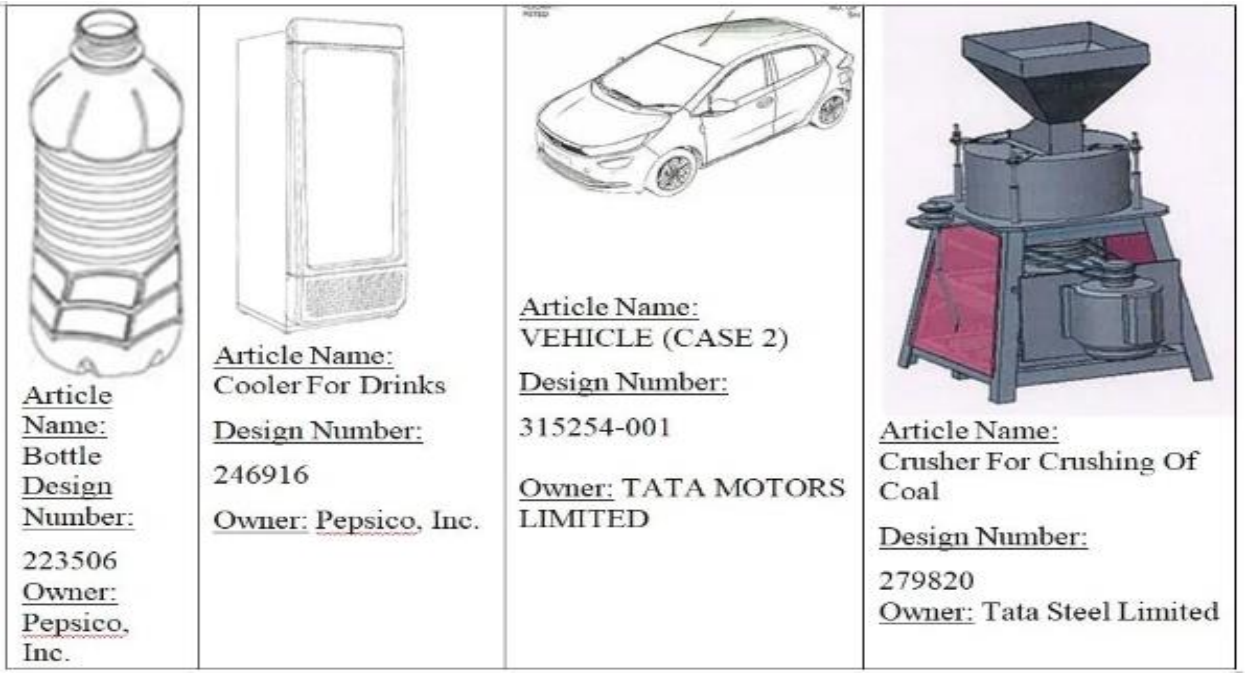
INDUSTRIAL DESIGNS

Industrial designs are those designs that give ornamental or aesthetic value to a product, which is then manufactured industrially. An industrial design may consist of three-dimensional (3D) features such as the shape of a bottle or vase used in various industries or two-dimensional (2D) features such as patterns for textiles and wallpaper that serve the purpose of decoration



Article Name: Bottle Design Number: 223506 Owner: Pepsico, Inc.

Article Name: Cooler For Drinks Design Number: 246916 Owner: Pepsico, Inc.

Article Name: VEHICLE (CASE 2) Design Number: 315254-001 Owner: TATA MOTORS LIMITED

Article Name: Crusher For Crushing Of Coal Design Number: 279820 Owner: Tata Steel Limited

REGISTRATION OF INDUSTRIAL DESIGNS

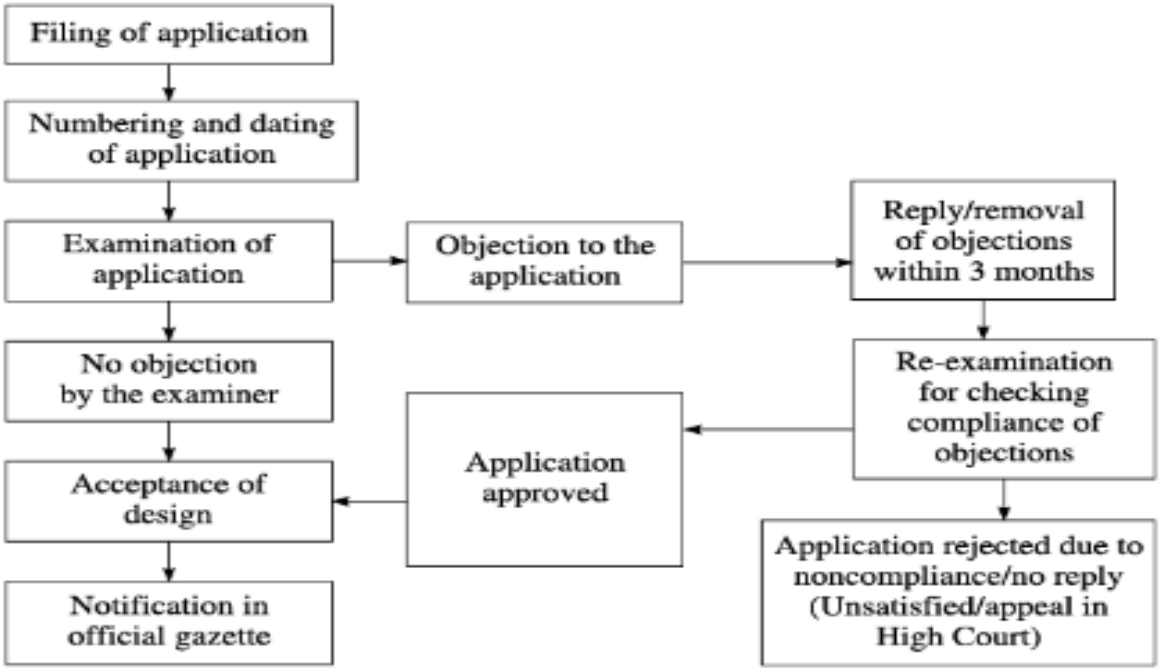


Figure 6.2 Process for Registration of Industrial Designs.

Steps involved in registering a Design in India:

a) Design Application

A design application is made on Form 1 along with the prescribed fee stating name in full, address and nationality, name of the article, class number and address for service in India.

In India, only a registered a patent agent or legal practitioner can be appointed as an authorised agent. And the application shall also be signed either by the applicant or by his authorized agent.

- Following documents has to be submitted while filing design application:
- Representation in quadruplicate of the article where drawings, photographs, tracings or other representations including computer graphics should clearly show the features of the design from different views.
- A statement of novelty and disclaimer (if any) in respect of mechanical action, trademark, work, letter, numerals should be endorsed on each representation sheet which should be duly signed and dated.
- Power of attorney (if necessary).
- Priority documents (if any) in case of convention application claimed under Section 44 of the Designs Act, 2000
- For small entity, Form 24 & documentary evidences.

b) Initial processing of Design Application

After filing of the design application with the prescribed fee, the design application is accorded with a date and a serial number. The serial number eventually becomes the registration number of the design post-registration.

c) Examination

Once the design application is filed, it will be taken up for **examination** under Section 5 and 44 of the Act.

At this stage, the Examiner of designs does a formality check to determine if the application has fulfilled the prescribed criteria and a substantive examination where the examiner sees if the design and novel and if there are any similar designs already on the Register.

In the in the eaxamination report, the examiner highlights the Defects or objections in the application, if any, noticed during examination of the application. The examination report is communicated to the applicant or to his agent at the address for service.

The defects notified by the examiner must be corrected within a period of **6 months** from the official date of examination report.

(

d) Acceptance and Notification

If there are no objections, the design will be registered. However, if there are objections then it is communicated to the applicant who is required to comply with the objections within 6 months from the date of filing of the application.

Once the design application is accepted the same is notified in the Patent Office Journal.

e) Abandonment

In case the applicant fails to respond to the objections or does not comply with the objections raised, then the design shall be deemed to have been abandoned.

f) Hearing

In case the applicant contests the objections, and the defects are not rectified, as required by Controller, a hearing will be provided to the applicant.

The hearing will be appointed within 1-2 months.

After hearing the controller shall decide whether the application should be accepted or not.

The Controller's decision after the hearing is communicated in writing (stating reasons) to the Applicant or his Agent.

Any person aggrieved by the decision of the Controller refusing to register a design may appeal to the High Court. The appeal should be made within three months from the date of the Controller's decision.

g) Registration and Publication

The application is registered once all the requirements are fulfilled by the applicant after which it is published in the Patent Office Journal which is published every Friday.

h) Certificate of Registration

Once the design is registered and details are entered in the Register and a certificate of design registration is issued.

i) Validity

A design registration lasts for a period of 10 years from the date of registration after which an extension can be filed for another 5 years.

COPYRIGHTS IN INDUSTRIAL DESIGNS

There are several forms of **Intellectual Property (IP)**; sometimes it is difficult to determine what type applies to your design or product.

Copyright

Copyright protects original literary, dramatic, musical and artistic works. For example, copyright protection would extend to paintings, photographs, song lyrics, musical composition, novels, and graphic designs.

Although copyright protection is automatic for a work that is original and fixed, there are **benefits to registering copyright**, such as proof of ownership and public notice of the work. Learn more about **Copyright protection**.

Industrial Design

Industrial Design protects the visible and aesthetic features of a product. For example, industrial design protection would extend to a novel shape of a bottle, a novel pattern applied to a chair, and a novel graphical user interface (GUI) on a mobile device. **In order to protect your designs, they must be registered.** Learn more about **Industrial Design protection.**

Overlapping IP

Sometimes, artistic work may be protected by both Copyright and Industrial Design. For example, if you have created a unique design, the design itself would automatically be protected by **Copyright**. However, with this unique design you plan to incorporate it into a necklace pendant that you sell. For this specific use of the design in a product, you would want to also protect it under an **Industrial Design**.

- Interface between copyright and ID
- Both deal with the protection of creative works
- Different approach
- Industrial design protection criteria differ from copyright protection criteria
- Period of protection
- Industrial designs may also be protected under copyright

TERMS,PROCEDURE AND CONDITIONS OF INDUSTRIAL DESIGNS:

Period of validity of Design Registration

- 1. Initially 10 years from the date of registration
- 2. Later it shall be renewed for every 5 years with applicable fee

Conditions For Registration

- Be new or original registration
- Not been disclosed to the public anywhere by publication .

- Be significantly distinguishable from known designs or combination of known designs.
- Not comprise or contain scandalous or obscene matter.
- Not be a mere mechanical contrivance.
- Be applied to an article and should appeal to the eye.
- Not be contrary to public order or morality.
- Not be prejudicial to the security of India

INFRIGNEMENT OF ID:

The unauthorized copying of an existing registered design is considered as design infringement. The section 22 of the Design Act talks about the design infringement, it says that any false or apparent imitation of a registered design without the authorization of the registered design's owner or proprietor is illegal. Additionally, the section restricts the importation of any chemical or material that closely resembles a registered design.

In simpler terms, when someone else imports, applies, or publishes the registered design, or any evident, fraudulent, or imitation thereof, without the owner's permission, that's called an infringement of the registered design.

A third party manufactures or sells, etc., the registered design or any similar design for commercial purposes (meaning that private or domestic use is excluded) and if the third party is not licensed to do so by the owner of the registered design right, such activity constitutes a design right infringement.

Remedies for Infringement:

Under Section 22(2)(a) of the Design Act, the one who infringes shall pay a sum (not exceeding) Rs. 25,000/ (Rupees Twenty-five thousand only) for every breach contravened. The total amount shall sum up to (not exceeding) Rs. 50,000 (Rupees Fifty thousand only). The above amount is for the recovery of the Infringement.

Under Section 22(2)(b), it is mentioned that the owner of the registered Design is vested with certain rights wherein it can call for recovery of damages and make the infringing party liable.

Section 55 of the Copyright Act of 1957 provides the scope of civil remedies available on the proprietor's registered work. It helps to seek remedies, claim damages or file a suit for injunction against anyone who infringes the registered article under the Act.

The claimant also enjoys the entitlement along with profits gained by the infringing party upon the infringed design.

If in any circumstance, the registered user

stop importing the products and confiscate any such product that holds the power to infringe the rights of the registered person.

The criminal remedies -punished with imprisonment for a minimum of six months extended up to three years. (along with fine ranging from 50,000 INR to 2,00,000 INR)

punishment on second and subsequent crime ----imprisonment for a minimum of one year which can be further extended to three years with a fine ranging from 1,00,000 INR to 2,00,000 INR.

SEMICONDUCTOR INTEGRATED CIRCUIT LAYOUT DESIGN (SICLD) ACT, 2000

An integrated circuit is a miniature electrical circuit containing electronic devices, some or all of the devices and interconnections of which are embedded in or on a piece of material, usually a semi-conductor material e.g. silicon.

Integrated circuits are used as computer memory circuits and microprocessors.

They are used in the

aircraft,
cars,
washing machines,
radios and
cellular telephones

Layout or Topography

Layout designs, sometimes called topographies, of integrated circuits are the three-dimensional placement of some or all of the elements and interconnections that make up an integrated circuit.

New layout designs of integrated circuits aim mainly at improving the performance efficiency of the circuitry within the limits of the materials and technologies being used. This should result in more functions being carried out with lower power consumption on the same amount of semi-conductor material. For consumers this means products that are better value for money.

Criteria of registration of Layout Design_____

Original, distinct, and able to stand out from other layout designs.

A layout design is unique if it is the outcome of the creator's own intellectual work and is not widely used among layout designers and integrated circuit makers at the time of its development. A layout design that consists of a common combination of parts and interconnections among layout-design makers and manufacturers of semiconductor integrated circuits is deemed original if the combination as a whole is the result of the creator's own intellectual work.

The Act prohibits the registration of layout designs that are not original; or that have been commercially exploited anywhere in India or in a conventional country; or that are not inherently distinctive; or that are not inherently capable of being distinguished from any other registered layout design.

Provided, however, that for the purposes of this Act, a layout design that has been commercially exploited for not more than two years from the date on which an application for its registration has been filed either in India or in a conventional country is treated as not having been commercially exploited.

A layout design can only be registered for ten years from the date of submitting an application for registration or the date of first commercial exploitation anywhere in India or in any nation, whichever comes first.

The Indian Semiconductor Integrated Circuits Layout-Design Registry is now based in New Delhi and is administered by the Department of Information Technology (DIT), Ministry of Communications and Information Technology.

TRADE SECRETS

Trade secrets are intellectual property (IP) rights on confidential information which may be sold or licensed.

What is a trade secret

Trade Secret, the name itself defines the secret of any trade or business that is known to a limited group of persons and has a commercial value. According to WIPO (World Intellectual Property Organisation), Trade Secrets are intellectual property right(s) on confidential information which may be sold or licensed. Trade Secrets do not require registration, unlike other Intellectual Property Rights.

Essentials of a trade secret

- It should have commercial value as it is a secret
- It should not be widely known except to a limited group of persons related to the business
- To keep the information secret, the owner has taken reasonable steps.

Types of trade secrets

- **technical information**
- **commercial information**,
- **combination of elements**,
- financial information
- formulas and recipes and
- source codes.
- Financial
- Business
- Scientific
- Technical
- Economic
- Engineering
- Such information, according to federal law, includes:
- Patterns
- Plans
- Compilations
- Program devices
- Formulas
- Designs
- Prototypes
- Methods
- Techniques
- Processes
- Procedures
- Programs
- Codes

Term of Trade Secret registration

Trade secret protection is not limited in time (patents last in general for up to 20 years). It may continue indefinitely as long as the secret is not revealed to the public; trade secrets involve no

registration costs (though keeping the information confidential may entail high costs in certain cases);

- **Copyright Law** also protects the trade secrets involved in business data. Further, the Personal Data Protection Bill, 2019 introduced a specialised regulatory approach for the Protection and Privacy of Data of Personal and Non-personal Data in any form (digital or non-digital).
- Section 72 of **Information Technology, 2000** imposes a penalty for breach of confidentiality and privacy.
- Section 405-409 of the **Indian Penal Code,1860** deals with the cases when there is a Criminal Breach of trust.

UNIT–5:INTELLECTUAL PROPERTY MANAGEMENT (9) Creating Intellectual Property: Need for creating intellectual property – Development of IP and Knowledge – Types of innovations – Behavioral aspects. Intellectual Property Management:Need and importance of IP management – IP management activities – 5Cs model of managing IP – Research and Developments in India (Case Study).

NEED FOR CREATING INTELLECTUAL PROPERTY

Intellectual property rights not only protect the ideas or concepts of business but also protect the genuine business assets that are vital to the products and services.

The need for creation of intellectual property is envisage due to following reasons:

- Wealth creation
- Identity in the marketplace
- Entering in new markets
- Creation of entry barriers
- Strengthening and safeguarding the existing IP
- Shaping industry architecture
- Protecting traditional knowledge

- Wealth creation: Intellectual property rights can help you generate business through the licensing, sale and even commercialization of the products and services protected under IPRs. This will ultimately improve the market share and helps in raising profits. Having registered and protected intellectual property rights can also raise the business' wealth
- Identity in the market place: Getting intellectual property rights can help the business' image. Intellectual property rights like trademark registration can help to separate the products and services from others
- Entering new markets: A business that has registered IPRs will be able to use brands and designs to market its products and services to other markets as well. A business can also tap into the franchising agreements with overseas companies or export patented products.
- Creation of entry barriers: A barrier to entry is any obstacle that limits or prevents others from competing directly with company's product or service. Registered intellectual property like patent and trade secrets serve as a potential barrier to entry. A strong and well-drafted utility patent gives the owner the right to prevent any other party from making, using or selling the patented invention in the territory covered by the patent. Potential competitors face risk.
- Strengthening and safeguarding existing IP: A proactive approach to intellectual property protection is not only a legal necessity but a strategic imperative for the sustained growth of startups in India. By leveraging legal frameworks, adopting best practices, and utilizing available government resources, startups can ensure their innovations are shielded, paving the way for long-term success in the competitive business landscape.
- Shaping industry architecture: Intellectual property comes in many forms. They can be in the form of books, music, designs, processes, marks, geographical indications or even data or informations used in industry or commerce. There is a trend that the scope and

form of intellectual property will be further expanded in the future. Most objects involve in day to day life such as furnitures, stationary, kitchenette, automobiles, computers, telecommunication equipments, etc. did not exist thousands of years ago. They are not natural objects but are made by man, the fruits of intellectual property.

- Protecting traditional knowledge: is incredibly essential to preserve traditional knowledge, especially in these ever-changing times. Protecting traditional knowledge can stop unauthorised, commercial misuse of this knowledge base. If it remains unprotected, indigenous people who are responsible for bringing it to the forefront can end up suffering huge losses, on an emotional as well as a financial level. By protecting traditional knowledge, one can protect and preserve ancient practices.

DEVELOPMENT OF IP AND KNOWLEDGE

A variety of input factors, including social, cultural, economic, genetic, and legal influences, frame individual understanding around intellectual property rights. This psychological understanding of intellectual property rights, in turn, drives behavioural activity concerning individual decisions to engage in creative endeavours, invest resources in innovation, and to observe (or not) the intellectual property rights of others.

- Human Thought Process
- Tacit Ideas/Knowledge
- Codification
- Validation/Experimentation
- Explicit Scientific/Business Knowledge
- Scrutiny
- Intellectual Property

- Human thought process : The success of intellectual property (IP) systems depends on their ability to influence human behaviour in relation to creativity and innovation. Intellectual property (IP) pertains to any original creation of the human intellect such as artistic, literary, technical, or scientific creation. Intellectual property rights (IPR) refers to the legal rights given to the inventor or creator to protect his invention or creation for a certain period of tim
- Tacit ideas and knowledge: Tacit knowledge is a valuable input into innovation processes. Knowledge obtained by experience or by interaction can differ in impact. Awareness, critical thinking, and willingness to share enhance tacit effectiveness. Innovation type (product or process) varies in how tacit influences outcomes.
- Codification: It is the act, process, or result of stating the rules and principles applicable in a given legal order to one or more broad areas of life in this form of a code
- Validation/experimentation: Product validation is the process of testing an idea with potential users to get feedback on a product's viability. It checks whether a product or feature addresses the needs and pain points of current and potential customers. **Engaging in product validation early in the development process strategically direct time and**

funds to create the best product possible. Experimentation is a form of product validation. It's most useful to assess iterations and improvements to a feature or product once it's already been built. Validation can help inform the direction of product experiments and help to reduce overall assumptions.

- Explicit scientific / business knowledge: Discoveries made through scientific research can have great value—to researchers in advancing knowledge, to governments in setting public policy, and to industry in developing new products.
- Scrutiny: The value of an IP asset essentially comes from the right the owner of that asset has to exclude competitors from using it. For an IP asset to have a quantifiable value it should: generate a measurable amount of economic benefits to its owner/user; and. enhance the value of other assets with which it is associated.
- Intellectual property is crucial that enterprises identify and develop their knowledge base, not least in their market relationships. Knowledge emerges in network relationships between an enterprise and its surrounding organisations, and can be legally protected as intellectual property (IP). A clearer notion of the way IP can be analysed may improve the economic outcome of investments in innovation. Relationship marketing clearly has a role in the marketing of technological innovation and product development

INNOVATION

- Innovation can refer to **something new or to a change made to an existing product, idea, or** field

Types of innovations

Innovation drives progress and propels societies and businesses forward by introducing new ideas, products and processes.

There are four distinct types of innovation. These classifications help us understand the diverse ways innovation manifests itself and its impact on industries.

Types of innovation

Below is a general explanation of the four types of innovation as described by Henderson and Clark.

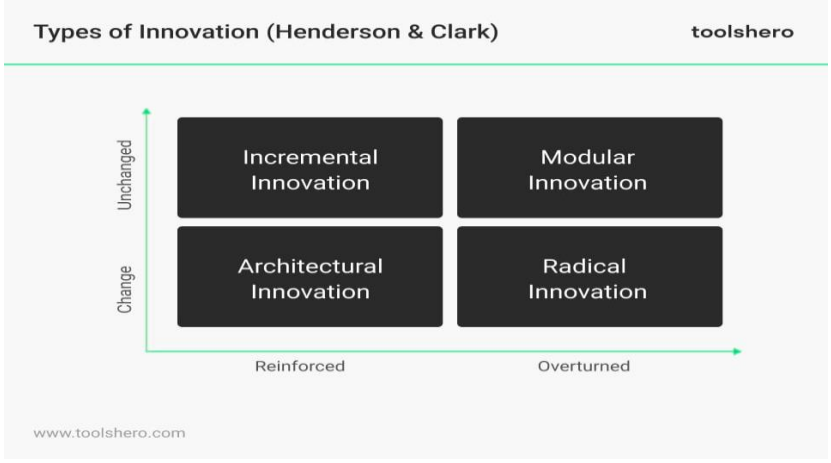


Figure 1 – 4 types of innovation (Henderson and Clark)

Type 1 – Incremental innovation

Incremental innovation refers to small, gradual improvements made to existing products, processes or services. It involves making incremental changes or improvements to improve efficiency, quality or functionality.

Example: The continuous updates and improvements made to popular software applications such as Microsoft Office, with each new version introducing new features, improved user experience, and better performance.

Benefits of incremental innovation:

- Enables continuous improvement of existing products, processes or services
- Minimizes risks, compared to radical changes, making it easier to implement and adopt
- Increases customer satisfaction by addressing incremental needs and preferences

Type 2 – Modular innovation

Modular innovation means developing independent components or modules that can be easily combined or exchanged to create different configurations. It offers flexibility, efficiency and customization options in design and production.

Example: Lego building blocks offer modular innovation where individual blocks can be combined and interchanged to create countless configurations and structures, allowing children to exercise their creativity and imagination.

Benefits of modular innovation:

- Facilitates faster development and implementation of new products or services
- Promotes scalability and customization through modular components
- Strengthens collaboration and innovation by allowing various organizations to contribute to a shared ecosystem

Type 3 – Architectural innovation

Architectural innovation involves reconfiguring the overall design or structure of a product, system, or organization. It involves making significant changes to the underlying framework or architecture to achieve new functionality, performance improvements, or cost efficiency.

Example: Tesla's electric cars are an example of architectural innovation by integrating advanced battery technology, electric drive systems and software systems.

This integration is revolutionizing the automotive industry by offering sustainable, high-performance vehicles with unique features such as over-the-air updates and autonomous driving.

Benefits architectural innovation:

- Enables the creation of new business models and value propositions
- Improves flexibility and adaptability by uncoupling components within a system
- Drives collaboration and partnership opportunities using modular interfaces

Type 4 – Radical innovation

Radical innovation involves introducing completely new products, processes or business models that significantly disrupt existing markets or create entirely new ones. It is often accompanied by groundbreaking and transformative developments.

Example: The introduction of the Internet and the World Wide Web has revolutionized communication, access to information and the way we do business. This radical innovation has brought about profound changes in several industries, enabling global connectivity, e-commerce and the digital transformation of countless aspects of our lives.

Benefits of radical innovation:

- Holds the potential for disruptive and transformative breakthroughs
- Creates new markets or radically reforms existing markets

- Offers competitive advantage and differentiation by introducing new and unique solutions

Summary on the 4 types of innovation

The Henderson and Clark framework is based on extensive research into innovation practices across industries.

The four types of innovation are:

- Incremental innovation: Small, gradual improvements to existing products, processes, or services. Example: Ongoing updates in software applications such as Microsoft Office.
- Modular innovation: Development of independent components that can be easily combined or exchanged. Example: Lego building blocks.
- Architectural innovation: Reconfiguring the design or structure of a product, system, or organization. Example: Tesla's electric cars with advanced battery technology and software.
- Radical innovation: The introduction of completely new products, processes or business models that disrupt existing markets or create new ones. Example: the Internet and the World Wide Web.

Behavioral aspects:

Behavioural aspects hinder IP management and administration. Hence the following aspects has to be followed to improve the number of intellectual properties.

- Open Atmosphere
- Tolerance for Failure
- Free Communication
- Quest for Knowledge
- Decentralization
- Management Support

- Open Atmosphere:
- The individuals and employees should be provided with an environment where any idea can be easily shared and transformed. The discouragement of new ideas and innovative thoughts should be completely avoided. All information and resources also should be available for the inventors and innovators.
- Tolerance for Failure: With the emphasis properly placed on the positive aspects arising from a failure, the failure is positioned as a great learning experience for all of those

involved. By encouraging an open discussion of why things went wrong much can be gained and made available to the corporation. Managements who are intolerant of failure will ultimately kill initiative.

- Free communication : One of the easiest, most effective ways to encourage idea sharing is to make it clear that sharing ideas is acceptable. Think about it like this: People naturally shy away from embarrassment or negative feedback, so they might not share ideas unless given explicit permission. This can result in solely your most outspoken team members getting a say.
- Quest for knowledge : Knowledge is a powerful force that can open many doors of opportunity. It can provide us with the skills and understanding to tackle challenging tasks and improve our lives. Knowledge can also help us to gain insight into the world we live in, and equip us with the tools to make informed decisions and better navigate the intellectual property
- Decentralization : To maintain a competitive edge in today's economic environment, organizations must adjust quickly, demonstrating **flexibility and agility**, all of which can be handled through decentralization. Decentralization is a type of organizational structure that promotes more intensive **bottom-up communication** as well as a constant flow of ideas, information, and decisions. Slow advances in company performance can be attributed to a multi-layered organizational structure with decision-makers concentrated at the top-level management.
- In reality, decentralization entails distributing decision-making authority to lower-level management and employees. When employees are given this level of freedom and are rewarded for risk-taking, they become more creative in their pursuit of efficient solutions to satisfy unmet demands. Involving more people in decision-making, on the other hand, relieves pressure on top management, allowing them to focus on central issues.
- Management Support: Management support for innovation is not a one-time thing. It requires continuing top-level support. It is impossible in two months to create a complete plan when doing anything significant. If management doesn't support those efforts over time, no matter how good the idea, then there is no hope of success.

Intellectual Property Management

Intellectual Property management involves various strategies and practices to handle different types of intellectual property assets. Here are the different kinds of IP management:

- **Patent Management** involves the strategic planning, filing, and maintenance of patents. It includes identifying patentable inventions, conducting patent searches, drafting patent applications, and managing a portfolio of granted patents.
- **Trademark Management:** Managing trademarks involves selecting strong and distinctive marks, registering them with relevant authorities, monitoring potential infringement, and enforcing trademark rights to protect brand identity.
- **Copyright Management:** Copyright management protects original creative works such as literature, music, software, and art. It includes registering copyrights, licensing works, and enforcing rights against unauthorized use.

- **Trade Secret Management** involves identifying, categorizing, and safeguarding valuable proprietary information. It includes creating trade secret policies, implementing security measures, and managing access to confidential information.
- **Industrial Design Management:** Managing industrial designs entails protecting products' aesthetic and ornamental aspects.
- **IP Portfolio Management:** This approach involves overseeing and strategically managing an organization's entire portfolio of IP assets. It includes assessing the value of each purchase, determining its relevance to business goals, and optimizing the portfolio for maximum value.

Depending on the size and structure of the organization, IP management may involve different roles and responsibilities:

- **Chief Intellectual Property Officer (CIPO) or Chief IP Counsel:** In larger organizations, a dedicated CIPO or Chief IP Counsel might oversee all aspects of IP management. They lead IP strategy development, portfolio management, enforcement actions, and coordination with legal teams.
- **Legal Department:** The legal team is crucial in IP management, handling patent, trademark, and copyright filings, and legal enforcement against infringements. Attorneys provide legal advice on IP matters, draft agreements, and represent the company in litigation.
- **IP Manager or IP Coordinator:** This role focuses on day-to-day IP administration. IP managers handle tasks such as maintaining IP records, managing deadlines for renewals and filings, and coordinating with external IP counsel.
- **R&D and Innovation Teams:** These teams generate new intellectual property through research and development efforts. They work closely with legal and IP professionals to identify patentable inventions, conduct patent searches, and draft patent applications.

Benefits of IP Management:

1. Share of IP and knowledge assets in the firm valuation is increasing and these assets deserve to have adequate attention.
2. IP management can be crucial for the survival of an organization in the emerging knowledge economy.
3. Value derived from IP may be undermined in the absence of proper IP management.
4. Sound IP management is the pre-requisite for the sustenance of IP ecosystem in the organization.
5. Value originating from IP of an organization may be captured by other organization if safeguards through good IP management are not put in place.
6. Superior IP management can benefit the customers, in particular and society, in general through improved product and services.

IP MANAGEMENT ACTIVITIES:

The IP management activities include

- Undertaking Ip Intelligence
- Acquisition Of Ip
- Decision On Ip Portfolio
- Supporting Development Of Ip

- Commercialization Of Ip
- Protecting Ip Management
- Putting Ip Management In Place
- Carrying Out Ip Audits

- UNDERTAKING IP INTELLIGENCE: A*nalyzing competitor activities and being well-informed of innovative new technologies is essential to a good Intellectual Property (IP) strategy.. I*ntellectual property (IP) intelligence and search refers to a process of gathering and analysing IP-related data to provide businesses with relevant information on their industry and technologies. . Conducting IP searches can also help the company benchmark its technology against existing ones.
- ACQUISITION OF IP: Copyrights, trade- marks, and service marks may be obtained through creation, license or assignment and transfer., Registration of these IP types provides additional protections. Once obtained, intellectual property is like any other property; it can be sold, licensed, given away, or even forfeited.
- DECISION ON IP PORTFOLIO: Intellectual Property Portfolio Management is the strategic administration of a company's intellectual assets, encompassing patents, trademarks, copyrights, and trade secrets.The combination of the intellectual property rights is termed portfolio. The company should decide the best combination where the benefit is more than the cost. It involves a systematic approach to acquiring, safeguarding, enforcing, and leveraging these intellectual property rights to bolster a company's competitive edge and overall worth.
- SUPPORTING DEVELOPMENT OF IP: The Intellectual Property (IP) system arises as an opportunity to turn those innovative ideas, creative designs and other intangible assets into valuable business assets, which can be transferred, licensed or used The company should provide scope for research and development and provide resources to support development of intellectual property within the organization.
- COMMERCIALIZATION OF IP: IP commercialisation transforms an idea or innovation into a product or service which is profitable in nature. The sale of such a product or service is the most prevalent practice used for monetisation of creativity. IPRs play a very significant role in such circumstances. It prevents the illegal exploitation of protected features by the competitors.

  For instance, when a medical company comes up with new medicine, its formula is a result of long-term investment and thus, the company should be ab e to yield the returns of the investment.
- PROTECTING IP MANAGEMENT: When something new and innovative is created, the inventor has the right to protect it. Inventors can register their creations as intellectual properties by filing for an IP that enables them to avail sole monopoly over their creations.

As such, the right to protect IP entails the exclusive rights provided to the innovator or creator. IP rights denotes the legal rights provided to the creator and not the IP itself. It is necessary to understand the meaning of IP rights and be aware of the steps taken to protect them against infringement.

- PUTTING IP MANAGEMENT IN PLACE: The company should continuously involve is the way of managing intellectual property like; patent renewals, integration, and search.
- CARRYING OUT IP AUDITS : Conducting an audit of your existing intellectual property materials should be a part of your IP strategy development. Be sure to include utility patents, trademarks, copyrights, and design patents and the ownership and historical relationships related to these properties.

The scope of protection of the intellectual property should also be included in the intellectual property audit to determine whether there may be gaps in protection or risks in the development and intellectual property protection process. Finally, a formal exit strategy should be determined if problems arise at any stage of the development process.

5CS MODEL OF MANAGING IP

- CARVING

  It is important to have a clear and **concise IP policy in place**. This policy should be accessible to all employees and outline the company's position on intellectual property. Secondly, all employees should be **made aware of the policy** and be trained on how to comply with it. Larger companies may want to outline the roles and responsibilities of managers and employees in managing and disseminating the company policy regarding intellectual property used to ensure everyone follows the proper procedures to maintain the company's intellectual property rights.
- CREATING

  Develop a pool of well informed and trained human resource, deploy sufficient facilities(hardware & software) and create and promote an enabling environment for generating, protecting and managing intellectual property for progress of science, technology and arts leading to growth of trade and industry.
- COMMERCIALIZATION: IP commercialisation transforms an idea or innovation into a product or service which is profitable in nature. The sale of such a product or service is the most prevalent practice used for monetisation of creativity. IPRs play a very significant role in such circumstances. It prevents the illegal exploitation of protected features by the competitors.

For instance, when a medical company comes up with new medicine, its formula is a result of long-term investment and thus, the company should be ab e to yield the returns of the investment.

- CAPTURING: Of course, not all ideas are good ideas and even if there are good ideas, they may not be commercialised. If you implement a process to identify, capture and protect ideas, the business will preserve the ideas that can add value to the business.

The process should include a central person or team to whom employees can report innovations they make or solutions to problems they encounter that may be applied more broadly; have a standard form that can be used to explain what the innovation or solution is and how it works; and provide training on IP within the business to increase general awareness.

The most effective methods to stimulate and capture creativity in an organisation are to provide a framework that recognises IP in the business, establish a strong culture of support for creative thinking, provide mechanisms to recognise efforts by employees, allow freedom to explore new concepts, and facilitate regular discussions of IP issues.

To paraphrase a classic one-liner from a great movie: 'If you build it, they will come'. If you provide the structure and training, your employees will more than likely jump on board!

- CONSERVING :

Intellectual property law allows owners, inventors, and creators of intellectual property to protect themselves from unauthorized use of their property. The primary forms of intellectual property are patents (utility and design), trademarks, and copyrights.

Patents protect an inventor's creation, while trademark protection safeguards distinctive words, names, symbols, sounds, and colors used to distinguish one business's products and services from another.

Property that qualifies for copyright protection includes literary works such as books and computer programs; dramatic works and the accompanying words; pictorial, graphics, photographs, and sculptural works; motion pictures and audiovisual works; and sound recordings and musical works, including music from plays and dramatic readings, and recordings on tapes, cassettes, and CDs.

RESEARCH AND DEVELOPMENT IN INDIA (CASES)

Research: IPR research is an emerging area and the research activities and results are having wider scope in terms of their impact on the people in the country. Intellectual Property Rights have gained a lot of recognition in the past few years in India mainly due to globalized economy, economic activity in India being on a healthy growth path and the efforts made by the Government to create enabling milieu by way of modernizing the IPR infrastructure as well as implementing various programmes for creation of awareness among the professionals as well as general public. Most research that is going on as of now are based on individual initiatives or sponsored research by corporation, which arguably have a very limited scope. The academic or research activities also require quality human resources to man the research positions as well as financial and technical resources in order to conduct any meaningful in depth, multidisciplinary and/or mature research in the field of Intellectual Property.

This gap has been recognized by the government and therefore, it is proposed to include research by the following institutions;

- Council of Scientific & Industrial Research (CSIR)
- Indian Council of Agricultural Research (ICAR)
- Indian Council of Medical Research (ICMR)
- Defence Research and Development Organisation (DRDO)
- Department of Atomic Energy (DAE)
- Department of Space (DoS)
- Department of Electronics (DoE)

INCENTIVES TO RESEARCH AND DEVELOPMENT:

The following incentives are provided for research and development related to intellectual properties in India

- 100% write off of revenue expenditure on R&D;

- Exemption from Excise Duty and Customs duty
- Exemption from Price Control of Drugs
- Support in the form of grants for industrial R&D projects through Technology Development and Innovation Programme (TDIP)
- Associations of industry with the national R&D programmes in area of atomic energy space and Defence research

Intellectual property in India:

- Recently, India ranks **42nd among 55 leading global economies on the International Intellectual Property (IP) Index 2023** released by the **U.S. Chambers of Commerce**, according to which India is ripe to become a leader for emerging markets seeking to transform their economy through **IP-driven innovation.**

COMPANIES INVOLVED IN IP FOR AIML

- Tata Consultancy Services
- , Wipro
- Infosys
- HCL Technologies and
- IBM.

CHALLENGES IN INDIAN R&D

1. Indian R&D expenditure levels are lagging as compared to leading countries at the global platform.
2. There is an urgent need to prop up R&D expenditure and IP generation in the higher education sector.
3. There is need for better IP management so that IP assets can be put through the phase of commercialization.
4. There is a need on part of private sector to boost R&D expenditure.