MODULE 3: INTELLECTUAL PROPERTY RIGHTS, PATENTS AND PROCESS OF PATENTING

Syllabus

Introduction to Intellectual Property: Role of IP in the Economic and Cultural Development of the Society, IP Governance, IP as a Global Indicator of Innovation, Origin of IP, History of IP in India, Major Amendments in IP Laws and Acts in India.

Patents: Conditions for Obtaining a Patent Protection, To Patent or Not to Patent an Invention, Rights Associated with Patents, Enforcement of Patent Rights, Inventions, and Eligible for Patenting, Non-Patentable Matters, Patent Infringements, Avoid Public Disclosure of an Invention before Patenting.

Process of Patenting: Prior Art Search, Choice of Application to be Filed, Patent Application Forms, Jurisdiction of Filing Patent Application, Publication, Pre-grant Opposition, Examination, Grant of a Patent, Validity of Patent Protection, Post-grant Opposition, Commercialization of a Patent, Need for a Patent Attorney/Agent, Can a Worldwide Patent be Obtained, Do I Need First to File a Patent in India, Patent Related Forms, Fee Structure, Types of Patent Applications, Commonly Used Terms in Patenting, National Bodies Dealing with Patent Affairs, Utility Models

INTRODUCTION TO INTELLECTUAL PROPERTY

- Intellectual Property (IP) is the terminology attributed to intangible assets having commercial value, and arising from human intelligence, creativity, and imagination, but typically lacking physical form.
- Intellectual Property Rights (IPR) is the privileges accorded to the creator/inventor (of IP) in conformance with the laws. These rights are given to the creator/inventor in exchange for revealing the process of creation/invention in the public domain. The inventor is conferred with the special rights to use, sell, distribute, offering for sale and restricting others from using the invention without his prior permission

- Broadly, IP comprises of two branches i.e. Copyrights and Related Rights and Industrial Property Rights.
    - Copyrights and Related Rights refer to the creative expressions in the fields of literature and art, such as books, publications, architecture, music, wood/stone carvings, pictures, portrays sculptures, films and computer-based software's/databases.
    - The Industrial Property Rights refer to the Patents, Trademarks, Trade Services, Industrial Designs and Geographical Indications
- **Copyright**: Copyright is the right bestowed on the owner or creator in relation to publication, and distribution of a piece of writing, music, picture or related works. Copyright also applies to technical contents such as software, datasheets and related documents.
- **Patents:** A patent is a legal record that bestows the holder the exclusive right over an invention as per the claims, in a limited geographical domain and for a limited duration by thwarting possible interested parties from any form of manufacture, use or sale of the product or outcome of the invention
- **Trademarks:** A trademark is a sign that suitably differentiates the owner's goods or services from those of others
- **Trade services**: Any services in relation to trade or any trade related financing, lending or other financial accommodation provided(or to be provided) by the bank, including but not limited to issuance/amendment of letter of credit, document arrival under letter of credit, application for negotiation and inquiries etc.,
- **Industrial Designs**: An industrial design protection is related to certain specific ornamental shapes associated with products whose duplication the owner may wish to prevent
- **Geographical Indications:** A geographical indication (GI) is a name or sign used on products which corresponds to a specific geographical location or origin. Items that meet geographical origin and quality standards may be endorsed with a government-issued stamp which acts as official certification of the origins and standards of the product.

ROLE OF IP IN THE ECONOMIC AND CULTURAL DEVELOPMENT OF THE SOCIETY

- Creativity being the keystone of progress, no civilized society can afford to ignore the basic requirement of encouraging the same. The economic and social development of a society is largely dependent on creativity.
- The protection provided by the IPR to the creators/innovators is in fact an act of incentivization for encouraging them to create more and motivates others to create new.
- However, if IPR is practiced rigidly, it may have a negative impact on the progress of society. For example, compliance with the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement has affected the farming community as they are unable to store seeds for the next crop. Multinational companies regulate the price of seeds, which is generally beyond the reach of a majority of the farmers.
- To circumvent the negative impact of IPR, certain laws, exceptions and limitations associated with IPR have been enacted to maintain a balance between the interests of the creators/inventors and the community.
- For example, farmers rights under the Protection of Plant Varieties and Farmers Rights (PVP&FR) Act, 2001 entitles them to many privileges, such as Rights on seeds provides rights to the farmers to save seeds, use seeds and share, exchange or sell seeds to other farmers.
- Right to protection against accusations of infringement protects the farmers from infringement and other legal accusation levied upon them due to his legal ignorance in using other‘s plant varieties.
- The use of copyrighted material for education and religious ceremonies is exempted from the operation of the rights granted in the Copyright Act.
- Similarly, a patent can be revoked in favor of compulsory licensing by the government during an emergency or a natural calamity.
- In addition, if an invention/creation is not in the interest of society, it is not registered by the government for grant of any rights associated with IP. For example, cloning of human embryos is banned for IP protection, and so is the creation of super microbial pathogens, which can play havoc with human lives.

IP GOVERNANCE

- Since IP is an integral component of human society, each and every nation has dedicated agencies for laying out the guidelines, implementation and enforcement of IP related matters.
- In India, many organizations/agencies deal with various aspects of IP. The governance of all categories of IP, except the Plant Variety and Farmers Rights Act, is carried out by the Department for Promotion of Industry & Internal Trade (DPIIT) under the aegis of Ministry of Commerce and Industry, Govt. of India.
- There are a few other dedicated organizations/departments established by the government to promote patent-ecosystem (patent awareness, patent filing and patent commercialization) in India e.g. Technology Information Forecasting and Assessment Council (TIFAC), National Research Development Corporation (NRDC) and Cell for IPR Promotion and Management (CIPAM), etc.
- In order to create a hassle-free exchange of IP related activities amongst all the nations, it is imperative to have minimum standards of rules and regulations pertaining to all aspects of IP including rights, empowerment, exceptions, etc.
- To achieve this goal, the United Nations (UN) has established an organization called the World Intellectual Property Organization (WIPO).
- This agency is at the forefront of imparting knowledge about IP and governs international filing and registration of IP through various Conventions and Treaties like Paris Conventions, Patent Cooperation Treaty (PCT), Rome Convention, Berne Convention, etc.

IP AS A GLOBAL INDICATOR OF INNOVATION

- IP, especially patents, is considered as one of the important cogs in assessing the innovation index of a nation.
- The global ranking organizations always have IP or a subset of IP as one of the parameters for understanding and grading the Science, Technology and Innovation (STI) ecosystem of a nation.

- For example, the Scimago (publically available online portal which ranks journals and countries based on the data taken from Scopus) 2020 report ranked India at 4th position in the parameter of a number of Research Publications and 50th position in the parameter of Intellectual Property Rights.
- The global ranking can be improved by sensitizing the teaching and scientific communities about the importance of IP and creating infrastructure for the same in the institutes of higher learning.

ORIGIN OF IP

- Though there is no official record of the origin of IP, it is believed that a rudimentary form of IP was being practiced around 500 Before the Common Era (BCE) in Sybaris, a state of Greece.
- The natives of Sybaris were granted a year‘s protection for using their intellect to create
- any new improvement in luxury.
- A practical and pragmatic approach for IP governance started taking shape in medieval Europe. In 1623, Britain passed an Intellectual Property Legislation which entitled guilds (association of artisans or merchants) to create innovations and bring them to market for trade purposes.
- However, this legislation brought a lot of resentment amongst the public, and thus was replaced by the Statute of Monopolies‘, which gave the rights to the original creator/inventor for 14 years. Another legislation, Statute of Anne‘, was passed by the British parliament in 1710.
- This legislation aimed at strengthening copyrights by providing rights to the authors for recreation and distribution of their work. The work could also be renewed for another 14 years.
- By the end of the 18th century and the beginning of the 19th century, almost every country started laying down IP legislation to protect their novel inventions and creations.

HISTORY OF IP IN INDIA

Patents

- The history of the Indian patent system dates back to the pre independence era of British rule. The first patent related legislation in India was Act VI of 1856, adapted from the British Patent Law of 1852. The objective of this legislation was to encourage the inventions of new and useful manufactures.
- At the beginning of the 20th century, all the earlier Acts related to inventions and designs were done away with the introduction of "The Indian Patents and Designs Act" 1911 (Act II of 1911).
- As per this Act, the governance of patents was placed under the management of the Controller of Patents. In the next three decades, many amendments were introduced for reciprocal arrangements with other countries for securing priority dates. These amendments dealt with;
    - Use of invention by the government
    - Patent of Addition
    - Enhancing the term of the patent from 14 years to 16 years.
    - Filing of Provisional Application and submission of Complete Application within 9 months from the date of filing the application.
- Keeping the national interest in mind, recommendations were made in 1949 as a modification to existing "The Indian Patents and Designs Act". And those recommendations are as follows
    - Misuse of patents rights needs to be prevented.
    - There must be a clear indication in the Act that food, medicine and surgical and curative devices should be made available to the masses at the cheapest rate by giving reasonable compensation to the owner of the patent.
    - Amendments in Sections 22, 23 and 23A of the Patent and Design Act, 1911 on the lines of the UK Patent Act.
- These recommendations were introduced in the Act XXXII of 1950.
- Two years later, another amendment (Act LXX of 1952) was made to provide compulsory licensing of patents related to food, drugs and chemicals killing insects and

microbes. Based on these amendments, a bill was presented in the parliament in 1953 but was rejected.

- In 1957 a committee was constituted and the committee submitted its report to the government in 1959. It comprised of two segments addressing
    - General aspects of the patent laws, and
    - Bill rejected back in 1953.
- The revised patent legislation was submitted to the Lok Sabha in 1965. After many hiccups, clarifications and modifications the Patents Act, 1970
- In 1999, The Patents (Amendment) Act, 1999 was introduced providing for the filing of applications for _Product Patents‘ in the areas of drugs, pharmaceuticals and agrochemicals
- The new Patent Act also included provisions for the grant of Exclusive Market Rights (EMRs) for the distribution and sale of pharma products on fulfillment of certain conditions. The second amendment to the 1970 Act was made through the Patents (Amendment) Act, 2002 (Act 38 of 2002). This Act introduced new Patent Rules, 2003, thus replacing the earlier Patents Rules, 1972.
- With the rapidly changing scenario of IPR at a global level, a need was felt to further amend the Patent Act, 1970. The highlight of the Patents (Amendments) Act 2005 were:
    - Product patent for inventions in all fields of technology.
    - New forms of known substances excluded to prevent ever greening of the patent.
    - Rationalization of the opposition procedure.
    - Introduction of pre-grant opposition by representation.
    - Introduction of post-grant opposition.
    - Compulsory license for export purposes.
    - Compulsory license for manufacture.
    - Extension of grace period from 6 months to 12 months for filing a patent, if published in government exhibition.

Copyrights and related rights

- The concept of copyrights started way back in the 15th century. However, the actual need for copyrights law was felt only after the invention of printers and copiers.

- Before the invention of printers, writing could be created only once. It was highly laborious and the risk of errors was involved in the manual process of copying by a scribe.
- The evolution of copyrights law in India occurred in three phases. First, two phases were enacted during the British Raj.
    - In the first phase, the concept of copyrights was introduced in 1847 through an enactment during the East India Company‘s regime. The term of copyrights was for the lifetime of the author plus seven years after death. The registration of copyright was mandatory for the enforcement of rights under the Act. The government could grant a compulsory license to publish a book if the owner of the copyright, upon the death of the author, refused to allow its publication.
    - In the second phase Indian legislature, under the British Raj, enacted the Copyright Act of 1914 based on the Imperial Copyright Act (1911) of the UK. An Act for criminal sanction for an infringement was introduced.
    - The third phase of the copyrights regime was witnessed post-independence. The Copyright Act 1957 was enacted, superseding the Indian Copyright Act, 1914, in order to suit the provisions of the Berne Convention (1886).
- The 1957 Act has been amended six times (1983, 1984, 1992, 1994 and 1999, 2012), to comply with WIPO Copyright Treaty (WCT), 1996 and WIPO Performances and Phonograms Treaty (WPPT), 1996.
- India is an active member of nearly all significant international Conventions/Treaties related to Copyright Law e.g. the Berne Convention as modified in Paris in 1971, the Universal Copyright Convention (1951), the Rome Convention (1961), WCT, WPPT and (TRIPS, 1995).

Trademarks

- The first statutory law related to Trademarks (TM) in India was the Trade Marks Act, 1940, which was carved out from the Trade Marks Act, 1938 of the UK.
- It was followed by the incorporation of provisions of TM stated in the Indian Penal Code, Criminal Procedure Code and the Sea Customs Act.

- Later on, Trade Marks Act, 1940 was rechristened as Trade and Merchandise Marks Act, 1958.
- Nearly four decades later, this Act was repealed by the Trade Marks Act, 1999. The need for this occurred to comply with the provisions of the TRIPS. It is the current governing law related to register TM.

Geographical Indications

- India, as a member of WTO, enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999.
- It came into force with effect from 15th September 2003. Geographical Indicators have been defined under Article 22 (1) of the WTO Agreement on TRIPS.

Industrial Design

- The need to protect Industrial Designs (ID) was recognized in the 18th century and the Indian legislation enacted the "Patterns and Designs Act" in 1872 for the first time. The Act was enacted to protect the rights over the creation of the designs and novel patterns by the inventors.
- The Act was replaced by the British Patents and Designs Act in 1907, which later became the basis for the Indian Patents and Designs Act, 1911.
- In 1970, a separate Act was enacted for the patent, i.e. the Patent Act, 1970. The Indian Patents and Designs Act, 1911, remained in force for designs only.
- Finally, in the year 2000, a dedicated Act for the ID was passed, which came into force in 2001.

Semiconductor Integrated Circuits and Layout designs

- In the 21st century, Information Technology (IT) has revolutionized the economic and societal growth of the world economy.
- The rapid and tremendous scientific advancements in the field of IT resulted in the creation of a new class of IP called the Layout-Design of the Semiconductor Integrated Circuits. Various organizations, including WTO and TRIPS Agreement laid down rules

and regulations regarding the protection of Semiconductor Integrated Circuits and Layout Designs (SICLD)

- India being a member of the WTO also passed an Act called the SICLD Act, 2000. This Act is TRIPS compliant and fulfils the conditions of the TRIPS agreement (Articles. 35 to 38) concerning the protection of SICLD.

Plant varieties

- Till 1970s, not much emphasis was laid on patentable matter originating from animals and plants. However, microbes and microbial products/processes were patentable.
- To include all kinds of biological materials under the ambit of patent laws, a decision to enact a new sui generis law under the International Convention for the Protection of New Varieties of Plants (UPOV, 1978) and UPOV, 1991 was taken.
- These decisions were taken to address environmental and public interest concerns.
- The Indian Patents Act, 1970 excludes ―plants and animals in whole or any part thereof other than microorganisms‖ from patentability.
- To comply with the mandate of Article 27.3 (b) of TRIPS, India adopted the Protection of Plant Varieties and Farmers Rights (PPV&FR) Act, 2001 as a sui generis regime protecting not only new plant varieties but also farmer's rights.

Biodiversity conservation

- In 1927 the "Indian Forest Act" and later on the "Wildlife Protection Act" 1972 was enacted to provide legal protection to biodiversity.
- In 1988, the "National Forest Policy" was passed, which brought revolutionary changes in the conservation and management of biodiversity.
- The Acts and policies in force to protect the environment and biodiversity in India include Mining and Mineral Development Regulation Act, 1957; Water (prevention and control of pollution) Act, 1974; Forest Conservation Act, 1980; Biological Diversity Act, 2002; Scheduled Tribes and other Traditional Forest Dwellers (recognition of rights) Act, 2006; National Biodiversity Action Plan, 2009; National Environment Policy, 2006 and a few more.

MAJOR AMENDMENTS IN IP LAWS AND ACTS IN INDIA

In order to fill the gaps existing in the IP Laws and Acts and also to introduce new guidelines/directions based on the current scenario (socially and politically), each nation keeps on updating the concerned IP Laws and Acts. Some of the salient amendments made in Indian Laws and Acts on IPR are mentioned below:

Sl. No	Year	Historical Proceedings
PATENTS		
1	1856	▪ The Act VI of 1856 on the protection of inventions based on the British Patent Law of 1852.
2	1859	▪ Rights renamed as "Exclusive Privileges" ▪ Time for the priority increased from 6 months to 12 months.
3	1883	▪ The Patterns and Designs Protection Act ▪ Introduction of novelty in the invention. ▪ A grace period of 6 months for the disclosure of the invention.
4	1911	▪ Renamed as "The Indian Patent and Design Act" and brought under the management of "Controller of Patents"
5	1930	▪ Introduction of Patent of Addition. ▪ Government can use the invention if required. ▪ The term of patent protection increased from 14 to 16 years.
6	1945	▪ Filing of the provisional specification to secure the priority date. ▪ Provision of submitting complete specifications within 9 months.
7	1949	▪ Dedicated Committee formed under the leadership of Justice Bakshi Tek Chand for reviewing patent system as per the national Environment.
8	1950	▪ A working statement needs to be submitted at the Patent Office ▪ Endorsement of the Patents with the words "License of Right" on the application made by the government so that the Controller could grant The license.
9	1952	▪ Provision of "Compulsory License" in the areas of food, medicine and insecticide germicide. ▪ Process for producing substance or any invention relating to surgical

		or curative devices.
10	1965	▪ After incorporation of the recommendation submitted by the committee formed in 1949, a new bill was introduced in Lok Sabha but was not cleared.
11	1967	▪ Again submitted to Parliamentary Committee. ▪ 1911 Act remained applicable for Designs.
12	1970	▪ The Patent Act, 1970 passed by the Parliament Committee.
13	1972	▪ The Patent Act, 1970 came into force with the introduction of patent rules.
14	1995	▪ TRIPS Agreement was signed by India and got transition period 1995-2005 to make domestic laws compatible with TRIPS.
15	1999	▪ Introducing the provisions for receiving the applications for the product patent in the field of pharmaceuticals and agro-chemicals (mail box)*. ▪ Provisions for the grant of EMRs for distribution and sale of pharma products on fulfillment of certain conditions. ▪ Grant of EMR subject to certain conditions. After the amendments (1999) the product patents related to the pharmaceuticals and agrochemicals were kept on hold for examination till 2005. It is called a mailbox or black box.
16	2002	▪ The uniform 20-year term of the patent for all inventions. ▪ Disclosure of source and geographical origin of biological material made compulsory. ▪ Establishment of Appellate Board. ▪ Compulsory License provisions strengthened.
17	2003	▪ The Patents Rules, 2003 were introduced.
18	2005	▪ Product patent for inventions in all fields of technology including food, drug, chemicals and microorganisms. ▪ New forms of known substances excluded in order to prevent the ever-greening of the patent. ▪ Introduction of the pre-grant opposition.

		▪ Introduction of post-grant opposition. ▪ Extension of grace period to 12 months.
COPYRIGHTS AND RELATED RIGHTS		
1	1847	▪ The concept of Copyrights in India was introduced. ▪ Validity - Lifetime+7 years but not more than 42 years in total.
2	1914	▪ Copyright Act, 1914 was introduced based on the ▪ Imperial Copyright Act, 1911 of UK.
3	1957	▪ Copyright Act, 1914 was replaced with Copyright Act, 1957 with minor modifications
4	1984	▪ Penalty on second and subsequent conviction
5	1994	▪ Registration of Copyright Society made mandatory
6	2012	▪ To comply with international Treaties for copyrights protection in the digital environment. ▪ Right to receive royalties for authors and music composers. ▪ Exception of copyrights for physically disabled persons to access any work.
7	2013	▪ Copyrights Rules, 2013 introduced.
TRADEMARKS		
1	1940	▪ Trademarks Registry established in India.
2	1958	▪ The Trade and Merchandise Marks Act, 1958 enacted as per TRIPS Agreement.
3	1999	▪ Amended to avoid duplicity and ensure securing proprietors trade and goodwill
4	2002	▪ Trademarks Rules introduced.
5	2010	▪ Amended to comply with Madrid Protocol for international filing. ▪ Provision for filing opposition of the registration within 4 months.\
6	2013	▪ Trademarks Rules introduced.
GEOGRAPHICAL INDICATIONS		
1	1999	▪ Being a member of the World Trade Organization (TRIPS), GI of goods (Registration and Protection) Act was introduced.

2	2002	▪ The Geographical Indications of Goods (Registration and Protection) Rules, 2002 was introduced.
3	2003	▪ The Geographical Indications of Goods (Registration & Protection) Act came into force
INDUSTRIAL DESIGNS/ DESIGNS		
1	1872	▪ Patterns and Designs Protection Act introduced for the protection of new patterns and designs.
2	1888	▪ Amended as Invention and Design Act, 1988 for the protection of new inventions and designs.
3	1911	▪ Renamed as The Indian Patent and Design Act.
4	2000	▪ Design Act, 2000 was introduced; separated from the Indian Patent and Design Act.
5	2001	▪ Design Rules, 2001 introduced.
SEMICONDUCTOR INTEGRATED CIRCUITS: LAYOUT DESIGNS (SICLD)		
1	2000	▪ Semiconductor Integrated Circuits Layout Design (SICLD) Act 2000 introduced as a signatory of WTO.
2	2001	▪ SICLD Rules introduced.
PROTECTION OF PLANT VARITIES AND FARMERS RIGHTS		
1	1970	▪ The Patent Act, 1970 excluded plants and animals in whole or in any part from patentability (in 1999 amendments).
2	1991	▪ Enactment of protection of new varieties of plants on sui generis basis on the lines of UPOV.
3	2001	▪ In line with TRIPS Agreement enactment of PPV&FR Act was introduced.
BIOLOGICAL DIVERSITY		
1	2002	▪ The Biological Diversity Act, 2002 introduced on the lines of the Convention on Biological Diversity (CBD, 1992).
2	2003	▪ Establishment of National Biodiversity Authority. ▪ Designation of repositories under the Biological Diversity Act
3	2004	▪ Biological Diversity Rules introduced.

PATENTS

- A patent is an exclusive right granted for an innovation that generally provides a new way of doing something or offers a new technical solution to a problem.
- The exclusive right legally protects the invention from being copied or reproduced by others.
- In return, the invention must be disclosed in an application in a manner sufficiently clear and complete to enable it to be replicated by a person with an ordinary level of skill in the relevant field.

CONDITIONS FOR OBTAINING A PATENT PROTECTION

There is a set criterion, as provided in Section 2(1)(j) of the Patents Act, 1970, which must be fulfilled for a product or a process to qualify for the grant of a patent. The criterion encompasses:

- Novelty - *Not part of 'State of the Art'*. The innovation claimed in the patent application is new and not known to anybody in the world. In other words, the innovation is
    - not in the knowledge of the public,
    - not published anywhere through any means of publication and
    - not be claimed in any other specification by any other applicant.
- Inventive step - *Not obvious to the person (s) skilled in the art.* The innovation is
    - a technical advancement over the existing knowledge,
    - possesses economic significance and,
    - not obvious to a person skilled in the concerned subject.
- Capable of industrial application - *For the benefit of society*. The invention is capable of being made or used in any industry.

TO PATENT OR NOT TO PATENT AN INVENTION

- Once an invention has been developed, the inventor has to decide whether to exploit the invention for personal benefits as provided by the statutory laws of the country or put it in the public domain.
- By and large, the inventor prefers the former option. Only a miniscule of inventions is placed in the public domain without claiming any benefits.

- In the latter case, anybody can exploit the innovation for commercial or societal benefit without paying any money to the inventor.
- If the owner of an invention wishes to seek monetary gains, he can choose from either of the two options, i.e. patenting or Trade Secret. If the inventor is absolutely sure of maintaining the secrecy of invention for a very long period (maybe 100 years or more) and the probability of reverse engineering of the technology is nil or very low, then the "Trade Secret" category is preferred.
- If the invention has a short life span or can be kept secret only for a small period of time (a couple of years or so) or the probability of reverse engineering is high once the invention is in the public domain, then the "patent" category is preferred.

RIGHTS ASSOCIATED WITH PATENTS

- As per the Court of Law, a patent owner has the right to decide who may or may not use the patented invention.
- In other words, the patent protection provided by the law states that the invention cannot be commercially made, used, distributed, imported, or sold by others without the patent owner's consent.
- The patent owner may permit other parties to use the invention on mutually agreed terms.
- As a matter of fact, the patent rights are negative rights as the owner is restricting others from using the patent in any manner without his prior permission.
- The patent holder may choose to sue the infringing party to stop illegal use of the patent and also ask for compensation for the unauthorized use.

ENFORCEMENT OF PATENT RIGHTS

- Enforcement is the process of ensuring compliance with laws, regulations, rules, standards and social norms.
- Patent rights are usually enforced by the judicial courts.
- The Court of Law has the authority to stop patent infringement.
- However, the main responsibility for monitoring, identifying and taking action against infringers of a patent lies with the patent owner.

INVENTIONS ELIGIBLE FOR PATENTING

- Patents may be granted for inventions/technologies in any field, ranging from a paper clip or ballpoint pen to a nanotechnology chip or a Harvard mouse (mouse with cancer genes).
- It is a general belief that patents are awarded only to major scientific breakthroughs. But, it is not true.
- In fact, the majority of patents are granted to inventions displaying an improvement over the existing invention.
- For example, many patents can be awarded to a single molecule e.g. penicillin's (an antibiotic that kills microbes) and its derivatives. The derivatives are made by making subtle changes in the structure of the penicillin resulting in new/improved properties, such as acid stability or temperature stability or killing a wide range of microbes (germs). The new antibiotic molecules, known as second, third or fourth generation penicillin's can also be patented.
- In our daily life, we use many patented items, such as toothbrush, toothpaste, shoes, pen, eyeglasses, textiles, mobile phones, wrist watch, bicycle, scooter, car, television, cold drinks, beverages and many more.
- It is not uncommon that many products contain several inventions (patents) e.g. the laptop computer involves hundreds of inventions working together. Similarly, cars, mobile phones and televisions have many patented components.

NON-PATENTABLE MATTERS

In the Patent Act, 1970, there are some exclusion (product and processes) that cannot be patented, such as:

- **Invention contrary to public morality** - a method for human cloning, a method for gambling.
- **Mere discovery** - finding a new micro-organism occurring freely in nature, laws of gravity.
- **Mere discovery of a new form of a known substance** - use of aspirin for heart treatment. Aspirin was patented for reducing fever and mild pains.

- **Frivolous invention** - dough supplemented with herbs, merely changing the taste of the dough, 100 years calendar, and bus timetable.
- **Arrangement or rearrangement** - an umbrella fitted with a fan, a torch attached to a bucket.
- **Inventions falling within Section 20(1) of the Atomic Energy Act, 1962** - inventions relating to compounds of Uranium, Beryllium, Thorium, Plutonium, Radium, Graphite, Lithium and more as notified by the Central Government from time to time.
- **Literary, dramatic, musical, artistic work** - books, sculptures, drawings, paintings, computer programmer, mathematical calculations, online chatting method, method of teaching, method of learning a language as they are the subject matter of Copyright Act. 1957.
- **Topography of integrated circuits** - protection of layout designs of integrated circuits is provided separately under the Semiconductor Integrated Circuit Layout Designs Act, 2000.
- **Plants and animals** - plants and animals in whole or any part including seeds, varieties and species and essentially biological processes for the production or propagation of plants and animals are excluded from the scope of protection under patents.
- **Traditional knowledge** - an invention which in effect is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known components are also excluded.

PATENT INFRINGEMENTS

- Once the patent is granted to the applicant, he owns the right to use or exploit the invention in any capacity. If anyone uses the invention without the prior permission of the owner, that act will be considered an infringement of the invention. Infringements can be classified into two categories
- **Direct Infringement** - when a product is substantially close to any patented product or in a case where the marketing or commercial use of the invention is carried out without the permission of the owner of the invention.
- **Indirect Infringement** - When some amount of deceit or accidental infringement happens without any intention of infringement. If such an unlawful act has been

committed, the patentee holds the right to sue the infringer through judicial intervention. Every country has certain laws to deal with such unlawful acts. Following reliefs are made available to the patentee:

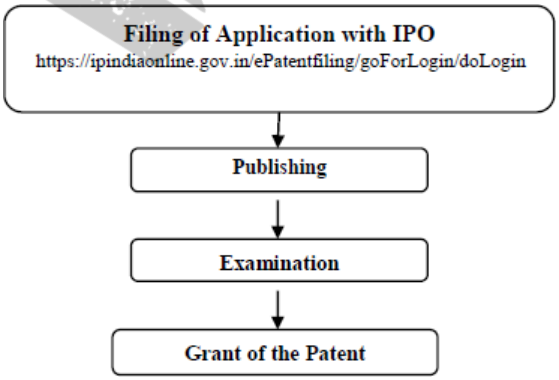
- Interlocutory/interim injunction.
- Damages or accounts of profits.
- Permanent injunction

AVOID PUBLIC DISCLOSURE OF AN INVENTION BEFORE PATENTING

- Generally, an invention that has been either published or publicly displayed cannot be patented, as the claimed invention will lose the Novelty 'criterion.
- However, under certain circumstances, the Patents Act provides a grace period of 12 months for filing a patent application from the date of its publication in a journal or presentation in a reputed scientific society or exhibition.
- Sometimes, disclosure of an invention before filing a patent application is unavoidable, e.g. selling your invention to a potential investor or a business partner who would like to know complete details of the invention in order to judge its commercial value. In such a case, it is advisable to sign a Non-Disclosure Agreement (NDA) or any other confidential agreement to safeguards your interest

PROCESS OF PATENTING

- In India, the process of grant of a patent is a lengthy procedure that may take anywhere 3-4 years or more. The major steps involved in this process are listed in figure



- While the process of patenting includes – Prior art search, Choice of Application to be Filed, Patent Application Forms, Jurisdiction of Filing Patent Application, Publication, Pre-grant Opposition, Examination, Grant of a Patent, Validity of Patent Protection, Post-grant Opposition

PRIOR ART SEARCH

- Before an inventor embarks upon the patent filing process, he has to ensure that his invention is novel as per the criterion for the grant of a patent. For this, he/she has to check whether or not his invention already exists in the public domain.
- For this, he/she needs to read patent documents and Non-Patent Literature (NPL), scientific journals/reports/magazines, etc.
- The information lying in the public domain in any form, either before the filing of the patent application or the priority date of the patent application claiming the invention, is termed as Prior Art.
- Conducting a prior art search before filing the patent has advantages as it averts infringement, tracks research and development and provides access to detailed information on the invention.
- The prior art search is carried out on the parameters such as novelty, patentability, state of the art, infringement, validity and freedom to operate.
- The commonly used databases for prior art search fall in two categories i.e. Patents Databases and NPL. The patent databases are
    - Indian Patent Advanced Search System (InPASS- http://ipindiaservices.gov.in/publicsearch/).
    - Patentscope (WIPO- https://www.wipo.int/patentscope/en/).
    - Espacenet (EU- https://worldwide.espacenet.com/patent/).
    - USPTO (USA- https://www.uspto.gov/).
    - Google Patents Advanced Search (https://patents.google.com/advanced).
    - Orbit Intelligence (https://www.questel.com/business-intelligence-software/orbit-intelligence/).
    - Derwent Innovation (https://clarivate.com/derwent/solutions/derwent-innovation/).

  - PROQUEST (https://about.proquest.com/search/?searchKeyword=patent+).
- Non-Patent Literature (NPL)
  - Scholarly publications: Handbooks, Textbooks, Withdrawn, Patents, Encyclopedias, Journals (IEEE, Research Gate, Springer, Wiley Online Library, etc.), Dissertations, NCBI‘s, PubMed, Conference Proceedings, Technical Reports, Public Conferences, etc.
  - Industry/trade publications: Industry reviews and public disclosures (Social media, YouTube, Books, Magazines, Datasheets, Blueprints, etc.).
  - Others: Newspapers, Websites, Technology blogs, Researchers websites, etc.
  - Although, majority of NPL data is available freely on the public forum, some of the journals are paid and can be accessed after paying the subscription.
  - Major Patent Office’s such as the United States Patent and Trademark Office's (USPTO), European Patent Office (EPO), Japan Patent Office (JPO), etc. are maintaining in house NPL databases to make patents examination more effective

CHOICE OF APPLICATION TO BE FILED

Once a decision has been made to patent the invention, the next step is, what kind of application needs to be filed i.e. provisional patent application or complete (Final) patent application - generally, the provisional patent application is preferred for the following reasons:

- It is cheaper, takes less time, and involves fewer formalities.
- Any improvements made in the invention after the filing of the provisional application can be included in the final application. In other words, the provisional application does not require complete specifications of the inventions. The application can be filed even though some data is yet to be collected from pending experiments.
- A provisional application allows you to secure a priority date for the patent applied.

PATENT APPLICATION FORMS

- As per the Patent Act, 1970 (Section 39) and the Patents Rules, 2003 (Rule 7, 54, 135 and sub rule (1) of rule 20, the application for the grant of patent is filed using Form-1 and Form-2.

- The information sought in Form-1 is general in nature i.e. Title of Application, Names of Applicant(s) and Inventor(s), Type of Application (Ordinary, Convention, PCT-NP (PCT- National Phase), Divisional, Patent of Addition, etc.).
- Whereas Form-2 seeks technical information and whether to file the provisional application or complete the application. For Provisional Application, only Description of the Invention and the Abstract is to be furnished. Whereas, Complete Application requires Description of the Invention, Abstract, Claims and the manner in which invention have to be performed.
- The Claims of the patent are a very crucial part of the specifications because they define the actual boundary of the invention.
- Claims specify what is actually claimed by the invention and what is being sought to be protected. It clearly describes what the patent does and does not cover

<table>
<tr><td colspan="3">"FORM 1
THE PATENTS ACT 1970 (39 of 1970) and
THE PATENTS RULES, 2003
APPLICATION FOR GRANT OF PATENT
(See section 7, 54 and 135 and sub-rule (1) of rule 20)</td><td colspan="3">(FOR OFFICE USE ONLY)</td></tr>
<tr><td colspan="3"></td><td>Application No.</td><td></td></tr>
<tr><td colspan="3"></td><td>Filing date:</td><td></td></tr>
<tr><td colspan="3"></td><td>Amountof Feepaid:</td><td></td></tr>
<tr><td colspan="3"></td><td>CBR No:</td><td></td></tr>
<tr><td colspan="3"></td><td>Signature:</td><td></td></tr>
<tr><td colspan="3">1. APPLICANT'S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)</td><td colspan="3"></td></tr>
<tr><td colspan="6">2. TYPE OF APPLICATION [Please tick (1) at the appropriate category]</td></tr>
<tr><td colspan="2">Ordinary ( )</td><td colspan="2">Convention ( )</td><td colspan="2">PCT-NP ( )</td></tr>
<tr><td>Divisional ( )</td><td>Patent of Addition ( )</td><td>Divisional ( )</td><td>Patent of Addition ( )</td><td>Divisional ( )</td><td>Patent of Addition ( )</td></tr>
</table>

3A APPLICANT(S)				
Name in Full	Nationality	Countryof Residence	Address of the Applicant	
			House No.	
			Street	
			City	
			State	
			Country	
			Pin code	

3B CATEGORY OF APPLICANT [Please tick ( ) at the appropriate category]			
Natural Person ( )	Other than Natural Person		
	Small Entity ( )	Start-up ( )	Others ( )

4. INVENTOR(S) [Please tick (1) at the appropriate category]		
Are all the inventor(s) same as the applicant(s) named above?	Yes ( )	No ( )

If "No", furnish the details of the inventor(s)

Name in Full	Nationality	Country of Residence	Address of the Inventor	
			House No.	
			Street	
			City	
			State	
			Country	
			Pin code	

5. TITLE OF THE INVENTION		
6. AUTHORISED REGISTERED PATENT AGENT(S)	IN/PA No.	
	Name	
	Mobile No.	
7. ADDRESS FOR SERVICE OF APPLICANT IN INDIA	Name	
	Postal Address	
	Telephone No.	
	Mobile No.	
	Fax No.	
	E-mail ID	

8. IN CASE OF APPLICATION CLAIMLNG PRIORITY OF APPLICATION FILED IN CONVENTION COUNTRY, PARTICULARS OF CONVENTION APPLICATION					
Country	Application number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)

9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)	
International application number	International filing date

10. IN CASE OF DIVISIONAL APPLICATION FILED UNDER SECTION 16, PARTICULARS OF ORIGINAL (FIRST) APPLICATION	
Original (first) application No.	Date of filing of original (first) application

11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT	
Main application/patent No.	Date of filing of main application

12. DECLARATIONS

(i) Declaration by the inventor(s)

(In case the applicant is an assignee: the inventors) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).

I/We,the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date
(b) Signature(s)
(c) Name(s)

(ii) Declaration by the applicant(s) in the convention country

(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)

I/we, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date
(b) Signature(s)
(c) Name(s) of the signatory

Source: http://www.ipindia.nic.in

FORM 2
THE PATENT ACT 1970
(39 of 1970)
&
The Patents Rules, 2003
PROVISIONAL/COMPLETE SPECIFICATION
(See section 10 and rule 13)

1. TITLE OF THE INVENTION

2. APPLICANT(S)

(a) NAME:

(b) NATIONALITY:

(c) ADDRESS:

3. PREAMBLE TO THE DESCRIPTION

PROVISIONAL	**COMPLETE**
The following specification describes the invention.	The following specification particularly describes the invention and the manner in which it is to be performed.

4. DESCRIPTION (Description shall start from next page)

5. CLAIMS (not applicable for provisional specification. Claims should start with the preamble — 'I/we claim' on separate page)

6. DATE AND SIGNATURE (to be given at the end of last page of specification)

7. ABSTRACT OF THE INVENTION (to be given along with complete specification on separate page)

Note: -

* Repeat boxes in case of more than one entry.
* To be signed by the applicant(s) or by authorized registered patent agent.
* Name of the applicant should be given in full, family name in the beginning.
* Complete address of the applicant should be given stating the postal index no. /code, state and country.
* Strike out the column which is/are not applicable

Source: http://www.ipindia.nic.in

JURISDICTION OF FILING PATENT APPLICATION

Region	States	Address
NORTH	Haryana, Himachal Pradesh, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand, Delhi and the Union Territory of Chandigarh, Jammu and Kashmir and Ladakh.	Intellectual Property Office Building, Plot No. 32, Sector 14, Dwarka, New Delhi-110078 Phone: 011-28032491 Fax: 011-28034301 Email: delhi-patent@nic.in
SOUTH	Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Telangana and the Union Territories of Pondicherry and Lakshadweep	Patent Office Intellectual Property Building G.S.T. Road, Guindy, Chennai-600032 Phone: 044-22505242 Fax: 044-22502066 Email: chennaipatent@nic.in
WEST	Maharashtra, Gujarat, Madhya Pradesh, Goa and Chhattisgarh and the Union Territories of Daman and Diu & Dadra and Nagar Haveli	Boudhik Sampada Bhawan, Antop Hill, S. M. Road, Mumbai - 400 037. Phone: 022- 24153651, 24148165 Fax: 022-24130387 Email: mumbaipatent@nic.in
REST OF INDIA	Remaining States	Intellectual Property Office Building, CP-2 Sector V, Salt Lake City, Kolkata-700091 Phone: 033-23679101, 033-23671987 Fax: 033-23671988 Email: kolkatapatent@nic.in

PUBLICATION

- Once the patent application has been filed at the Regional Patent Office, the patent application is kept secret for 18 months in the Patent Office.

- After the expiry of 18 months (from the date of filing of the application or the priority claimed date, whichever is earlier), the application is published in the Official Journal of Patent Office (http://www.ipindia.nic.in/journalpatents.html).
- The purpose of publishing the application is to inform the public about the invention. The publication of an application is a mandatory step.

PRE-GRANT OPPOSITION

- If anybody has an objection to the invention claimed in the patent application, he/she can challenge the application by approaching the Controller of Patents within 6 months from the date of publication. It is termed as Pre-grant Opposition.
- Depending on the outcome of the case, the patent application may be rejected or recommended for the next step, i.e. patent examination.
- Although the patent application is kept secret for 18 months, but under special circumstances, this period can be reduced when the patentee/applicant plans to sell or license the patent or seek an investor).
- For this, the applicant has to fill a Form-9 and submit it to the Controller General.

EXAMINATION

- Patent examination is a critical step in the process of grant of a patent. All the important criteria (novel, inventive step, etc.) are scrutinized by the professionals depending on the content of the invention.
- Usually, the examiner raises certain queries/doubts which need to be addressed by the inventors. Once the examiner is satisfied with the answers received from the inventors, the application is recommended for the grant of a patent.
- It is pertinent to mention that a patent application is not examined automatically after clearing the publication stage. The applicant or his representative has to make a request for examination of the patent by filing Form-18A and submitting the same within 48 months from the date of filing of the application

GRANT OF PATENT

- After fulfilling all the requirements for the grant of a patent, including all objections/queries raised by the Patent Examiner and the public at large, the patent is granted to the applicant.
- The granted patent is published in the Official Journal of the Patent Office.
- This journal is published every Friday and contains information related to patent applications published under section (u/s) 11A, post-grant publication, restoration of patent, notifications, list of non-working patents and public notices issued by the Patent Office.

VALIDITY OF PATENT PROTECTION

- The patent protection is granted to an applicant for a limited period, generally 20 years, starting from the date of filing of the application.
- Once a patent is granted for an invention in India, the next vital step is to ensure that it is renewed annually by paying Patent Renewal Fee as per Section 53, Rule 80 of the Indian Patents Act, till the expiry of the patent grant period.
- Non-payment of Patent Renewal Fee might result in the cancellation of the patent.
- In some countries, patent protection may be extended beyond 20 years.
- The extension aims to compensate for the time expended on the administrative approval procedure before products can be put on the market. The time taken for this procedure means that the patent owner may sometimes not be able to benefit from his right for a considerable period after the grant of the patent.

POST GRANT OPPOSITION

- Once the patent has been granted by the Patent Office, it still can be challenged by anyone within one year from the date of publication of the grant of the patent.
- The granted patent can be challenged either via a Patent Office or in a Court of Law.
- These bodies may invalidate or revoke a patent upon a successful challenge by the interested party on the grounds mentioned below:

- The applicant for the patent wrongfully obtained the invention or any part of the invention.
- The invention claimed has been published before the priority date.
- The invention claimed was publicly known / used before the priority date.
- The invention claimed is obvious and does not involve an inventive step.
- The subject of the claim is not patentable as per Chapter II of the Patent Act, 1970.
- The details/specifications of the invention do not sufficiently and clearly describe the invention.

COMMERCIALIZATION OF A PATENT

- The patent owner may grant permission to an individual/organization/industry to make, use, and sell his patented invention. This takes place according to agreed terms and conditions between the involving parties.
- A patent owner may grant a license to a third party for the reasons mentioned below:
  - The patent owner has a decent job e.g. university professor and has no desire or aptitude to exploit the patent on his own.
  - The patent owner may not have the necessary manufacturing facilities.
  - The manufacturing facility is not able to meet the market demand.
  - The patent owner wishes to concentrate on one geographic market; for other geographical markets, he may choose to license the patent rights.
- Once the patent is granted, the patentee (person holding the rights to the patent) enjoys the exclusive rights to use the patented invention.
- Only the patentee has the right to license or deal with the patent for any deliberations. Although, the validity of the granted patent is for 20 years (from the date of filing a patent application), but the patentee is required to furnish information (Form-27), on an annual basis relating to the commercialization/selling of the patent. It is called as Working/Licensing of the Patent.
- The licensing of a patent can be exclusive or non-exclusive.

- In an Exclusive License, the patent is sold to only one individual/organization for a fixed time period. During this time period, no other person or entity can exploit the relevant IP except the named licensee.
- In Non-Exclusive License, a patentee can sell his patent rights to as many individuals/parties as he likes. If the patentee is not able to commercialize his patent within three years from the date of the grant of a patent, any person may submit an application to the Controller of Patents for grant of Compulsory Licensing (of the patent), subject to the fulfillment of following conditions:
    - Reasonable requirements of the public concerning the patented invention have not been satisfied.
    - The patented invention is not available to the public at a reasonable price.
    - The patented invention is not worked in the territory of India.

NEED FOR PATENT ATTORNEY / AGENT

- In general, applicants can prepare their patent applications and file them without assistance from a patent attorney.
- However, given the complexity of patent documents, it is advisable to seek legal assistance from a patent attorney/agent when drafting a patent application.
- Furthermore, the legislation of many countries requires that an applicant, whose ordinary residence or principal place of business is outside the country, be represented by an attorney or agent qualified in the country (which usually means an agent or attorney who resides and practices in that country

CAN A WORLDWIDE PATENT BE OBTAINED?

- There is no such term as Universal Patent or World Patent or International Patent as the patent rights are territorial.
- An application for a patent must be filed with a Patent Office of the country in which one wishes to seek patent protection. Unfortunately, this option becomes laborious, cumbersome, time consuming and expensive if one wishes to file a patent application in many countries.

- To ease out this issue, many Regional Offices have been established which receive patent applications on behalf of a group of nations e.g. European Patent Office and African Regional Intellectual Property Organization.
- A single application is sufficient to cover many nations that are members of a particular regional office/organization.
- However, if one wishes to seek patent protection in several countries worldwide, it is preferred to file an international patent under the Patent Cooperation Treaty (PCT).
- The only condition is that the applicant's country should be a member of PCT. India, along with over 190 nations, is a member of PCT.

DO I NEED FIRST TO FILE A PATENT IN INDIA

- Yes, in general, Indian residents are required to file the patent application first in India. Subsequently, they may file for patent protection in other countries.
- But for this, prior approval is needed from the Patent Office. However, this approval can be waived off under the following circumstances:
    - The applicant is not an Indian resident.
    - If 6 weeks have expired since the patent application was filed in India by an Indian resident.
    - If two or more inventors are working on an invention in a foreign country and one of the inventors is an Indian resident. The invention does not have a potential market in India and hence does not wish to file the patent in India. In such a scenario, the Indian resident has to seek Foreign Filing Permission (FFP) from an Indian Patent Office.
    - In case of international collaboration, if one part of the invention originated in India and the inventor is an Indian resident, he has to seek permission to file the patent outside India.
    - If the invention is related to defense or atomic energy or utility model, the inventor/s needs to seek permission from the Indian Patent Office because inventions related to these domains are not the subject matter of patentability in India.

PATENT RELATED FORMS

- There are over 30 patent-related forms. Some of them are mentioned below.

Form No.	Title of Form
1	Application for a grant of a patent
2	Provisional/Complete specifications
7	Notice of opposition on grant of a patent
7A	For filing a representation opposing grant of a patent
17	Application for compulsory license
18	Request for examination of the application for patent
21	Request for termination of compulsory license
22	Application for registration of patent agent
27	Statement regarding the working of the patented invention on a commercial scale in India
30	Miscellaneous form to be used when no other form is prescribed

Source: http://www.ipindia.nic.in/writereaddata/Portal/IPORule/1_70_1_The-Patents-Rules-2003-Updated-till-23-June-2017.pdf

FEES STRUCTURE

- As per the patent Act, 1970 and The Patents Rules (1972), the requisite fee has been specified based on the type of form/s to be submitted to the Office.
- Electronically filed applications are 10% cheaper than physical filing.

Item	Natural person/ startup (₹)	Small entity alone or with a natural person /startup (₹)	Others alone or with natural person/ startup/ small entity (₹)
Provisional/Complete Specifications	1,600	4,000	8,000
Request for Early Publication	2,500	6,250	12,500
Request for Examination	4,000	10,000	20,000
Express Request For Examination	5,600	14,000	28,000
Renewal Fees (Annually)			
3rd to 6th Year	800	2,000	4,000
6th to 10th Year	2,400	6,000	12,000
11th to 15th Year	4,800	12,000	24,000
16th to 20th year	8,000	20,000	40,000

Source: http://www.ipindia.nic.in/writereaddata/Portal/IPOFormUpload/ 1_11_1/ Fees.pdf

TYPES OF PATENT APPLICATIONS

- **Provisional Application** - A patent application filed when the invention is not fully finalized and some part of the invention is still under experimentation. Such type of application helps to obtain the priority date for the invention.
- **Ordinary Application** - A patent application filed with complete specifications and claims but without claiming any priority date.
- **PCT Application** - An international application filed in accordance with PCT. A single application can be filed to seek patent protection and claim priority in all the member countries of PCT.
- **Divisional Application** - When an application claims more than one invention, the applicant on his own or to meet the official objection on the ground of plurality may

divide the application and file two or more applications. This application divided out of the parent one is known as a Divisional Application.

- **Patent of Addition Application** - When an invention is a slight modification of the earlier invention for which the patentee has already applied for or has obtained a patent, the applicant can go for Patent of Addition, if the modification in the invention is new. Benefit - There is no need to pay a separate renewal fee for the Patent of Addition, during the term of the main patent. It expires along with the main patent.
- **Convention Application** - If a patent application has been filed in the Indian Patent Office and the applicant wishes to file the same invention in the one or more Convention countries (e.g. Paris Convention) by claiming the same priority date on which application was filed in India, such an application is known as Convention Application. The applicant has to file Convention Application within 12 months from the date of filing in India to claim the same priority date.

COMMONLY USED TERMS IN PATENTING

Sl. No	Terms	Definition
1	Inventor	Creator of an invention
2	Applicant	Organization/individual/industry that files a patent application or applies for a patent
3	Patentee	A person/organization who owns the patent (granted)
4	Licensee	Organization/individual/industry which obtains a license of the patent from the Patentee for commercialization purpose
5	Assignee	A person in whose name patent has been assigned legally
6	In force	The applicant is paying the annuity (renewal fee) for the patent to keep it alive (Active Patent)
7	Working of a patent	The selling of a patent to an individual/party for commercial exploitation is called as working of a patent
8	Patent Specification	Patent specification is a written description of the invention and the way of representation and process of making and using the same

9	Priority right	It is a time-limited right, activated by the first filing of an application for a patent
10	Priority date	The claimed date on which the first application for the invention is filed
11	Patent claims	Claims can be defined as the scope of the protection conferred by a patent, or the protection sought in a patent application. The purpose of the claims is to define which subject matter is protected by the patent
12	National phase application	An application filed to obtain patents in different countries simultaneously based on a single International/PCT application
13	Patent revocation	The revocation means cancellation of the patent due to certain reasons, such as lack of patentability or wrongfully obtaining a patent
14	Restoration of patent	Once a patent has been ceased (e.g. due to non-payment of the fee) it can be restored within a permitted period by paying the requisite fee

NATIONAL BODIES DEALING WITH PATENT AFFAIRS

There are many departments/organizations/bodies dealing with various aspects of patents, namely,

- **The Indian Patent Office (IPO)** - The Office of the Controller General of Patents, Designs and Trade Marks generally known as the Indian Patent Office, is an agency under the Department for Promotion of Industry and Internal Trade which administers the Indian law of Patents, Designs and Trade Marks.
- **Department for Promotion for Industry and Internal Trade (DPIIT)** - DPIIT, earlier known as the Department of Industrial Policy and Promotion (DIPP), under the Ministry of Commerce and Industry, Govt. of India, is the apex IP body. It came into existence in 1995 and is the main body for regulating and administering the industrial sector.
- **Technology Information, Forecasting and Assessment Council (TIFAC)** - The importance of undertaking technology forecasting and assessment studies on a systematic

and continuing basis was highlighted in the Government of India's Technology Policy Statement (TPS) of 1983. Therefore in 1985, TIFAC was established as an autonomous body, registered as a Society in 1988, under the Department of Science and Technology. It is an important cog in filling a critical gap in the overall Science and Technology system of India. Its mission is to assess the state-of-art of technologies and set directions for future technological developments in India in important socio-economic sectors

- **National Research Development Corporation (NRDC) -** NRDC, an enterprise of Department of Scientific & Industrial Research (DSIR), Govt. of India, was set up in 1953 with a mandate to develop, promote and transfer/commercialize IP and technologies emanating from Higher Education Institutes (HEIs), R&D research laboratories/institutions and Public Sector Undertakings (PSUs). NRDC has a repository of 2500 Indian technologies, filed over 1700 Patents and transferred about 5000 technologies in different sectors in India. It has also created a technology data bank (http://fccollc.com/nrdclive/) containing information regarding technologies available in various fields, such as electrical & electronics, mechanical, coil, mining, biotechnology, healthcare, leather, etc.

UTILITY MODELS

- In many cases, a new invention involves an incremental improvement over the existing products, but this technical improvement is not sufficient enough to pass the stringent criterion of Novelty and Non-obviousness set aside for the grant of a patent. Such small innovations can still be legally protected in some countries and termed as 'Utility Models' or 'Petty Patents' or 'Innovation Patents'.
- In this case, the criterion of Novelty and Non-obviousness are diluted or relinquished. But the requirement of industrial application or utility is the same as that for patents.
- Utility Model is a helpful tool for Micro, Small and Medium Enterprises (MSME) since the grant of a Utility Model is usually less rigorous and involves minimal cost.
- MSMEs do not have deep pockets to carry out intensive R&D leading to the grant of patents. But their innovations are good enough for improving their products/processes and bringing more financial rewards. Such inventions pass the requirements set aside for Utility Models but not for patents.

- The life of the Utility Model is less as compared to the patents. It varies from 7-15 years in different countries.
- Nearly 80 countries, including France, Germany, Japan, South Korea, China, Finland, Russian Federation and Spain, provide protection for Utility Models under their IPR laws.
- India till date does not recognize utility patents. If these small patents are recognized under IP protection in India, it will catapult the number of patents (filed and granted) on annual basis.