
“शिक्षा मानव को बन्धनों से मुक्त करती है और आज के युग में तो यह लोकतंत्र की भावना का आधार भी है। जन्म तथा अन्य कारणों से उत्पन्न जाति एवं वर्गगत विषमताओं को दूर करते हुए मनुष्य को इन सबसे ऊपर उठाती है।”

-इन्दिरा गांधी

" Education is a liberating force, and in our age it is also a democratising force, cutting across the barriers of caste and class, smoothing out inequalities imposed by birth and other circumstances"

- Indira Gandhi



Block

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BASICS OF PATENTS

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MIP 102 PATENTS

Patent is the most significant form of IP to encourage creativity in science and technology and protect invention and innovation from appropriation by others. It is a strategic tool for economic growth facilitating FDI and technology transfer, stimulating R&D and for the creation of new technologies and businesses, empowering enterprises, along with trademarks expanding businesses globally. The course consists of four Blocks.

Block 1: In the first block of the course (MIP-102) we will present an introduction to the Indian Patent Act. (Unit 1) will deal with the fundamental of patenting (Pros and Cons) evolution of the patent regime in India. The different types of patents. Unit 2 of the block will deal with terms and definitions like patentable subject matter, invention, inventive step. Unit 3 will be dealing with the Rights in Patents (like grant, rights, amended motion of working of patent, renewal, rights relocation and compulsory license). Unit 4 deals with administration of patents where different patent officers in India will be dealt with recent contract details. An attempts will be made to discuss the role of patent agent eligibility of patent agents etc.

Block 2 (Unit 5,6,7,8) will deal with procedure for obtaining a patent in India. International patent search, documentation and analytics, patent specification and claims and commercialization of patents.

Block 3 (Unit 9,10,11,12) deals with the infringement of patents, issues necessary for filing opposition, which includes pre grant opposition and post grant opposition, defenses available under the provisions of Patent Act 1970, and Intellectual Property Appellate Board and its salient features.

Block 4 (Unit 13, 14, 15) deals with the emerging issues in Patenting like PCT/ International Patent filing strategy, Technology Transfer, Patent and Indian Biodiversity Act and latest Development / Issues in Patenting.

Each unit contains Self Assessment Questions (SAQs) that will help you to check yourself. Terminal Questions (TQs) at the end of each unit will further strengthen your grasp of the text material. Annexure and hints to SAQs and TQs given at the end of each unit may be consulted when necessary.

We wish you good luck and happy reading.

BLOCK 1 BASICS OF PATENTS

This block comprises of four units.

Unit 1: Deals with the fundamental of patenting. The units attempts to elaborate the reasons for patenting, the pros and cons, the evolution of patents regime in India and other countries and the different types of patents, the basic elements of patentability in an invention, things what could be patented and what could not be patented. Patent as a source of information etc.

Unit 2: Elaborates on the different terms and definitions like patentable subject matter, invention, inventive step, patent examination etc.

Unit 3: Discusses issues of Rights in Patents such as grant, rights awarded, notion of working of patents, renewal rights revocation and compulsory license.

Unit 4: Presents the overview of the Administration of patent like registration of patents, its contents, power of CG of patents in India, patent officers in India with recent contact details, role of patent agent, eligibility of patent agents, Appellate board etc.

UNIT 1 FUNDAMENTALS OF PATENTING

Structure

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Historical Background of Patents
 - 1.3.1 History of Patent Law in India
 - 1.3.2 History of Patent Law in Other Countries
- 1.4 Types of Patents
- 1.5 World Patent
- 1.6 Things that may be Patented
- 1.7 Things that cannot be Patented
- 1.8 Basic Elements of Patent Ability in an Invention
- 1.9 Procedure for Filing a Patent in India
- 1.10 Filing Patent Application in Other Countries
- 1.11 Steps Involved in Filing Intellectual Application
- 1.12 Cost of Patenting
- 1.13 Patent as a Source of Information
- 1.14 Research and Development and Patent Case Studies
- 1.15 Simple Inventions
- 1.16 New Chemical Products
- 1.17 Other Examples
- 1.18 Summary
- 1.19 Terminal Questions
- 1.20 Answers and Hints
- 1.21 References and Suggested Readings

1.1 INTRODUCTION

Intellectual property is defined in an all pervasive sense in Article 2(viii) of the Convention establishing the World Intellectual Property Organisation (WIPO) signed at Stockholm on July 14, 1967, to include the rights relating to literary, artistic and scientific works; performances of performing artists, phonograms, and broadcasts; inventions in all fields of human endeavor; scientific discoveries; industrial designs; trademarks service marks and commercial names and designations; protection against unfair competition. It specifies, "Intellectual Property shall include all other rights resulting form intellectual activity in the industrial, scientific, literary or artistic fields."

In the earlier part of the 20th century, industrial activity depended on the availability of production machinery, raw materials and capital. However, the share of high technology goods in the world merchandise exports has almost doubled from 10% in 1970 to 22% in 1966(?). Now, more than half of the Gross Domestic Product (GDP) of the major OECD (Organisation for Economic Cooperation and Development) countries, relates to knowledge based products and services. In fact the knowledge content in many high tech products is as high as 90%. Thus, the cost of a raw CD may be only Rs 40 but with the program written on it, the CD may sell for well over Rs 5,000. When knowledge is valuable and priced, it is but logical to have laws (both National and International) to protect it.

What is important to note that other than Patents, Copyrights and Trademarks many new forms of intellectual Property protection have come into existence. Moreover, what was not patentable ten years back is now patentable in many countries, like new types of hybrid seeds, computer programs, business method patents, new genetically modified organisms, some type of new life forms and genetically modified plants.

New or original knowledge and the creative expression of ideas provide the basis for creating and sustaining business and enterprise competitiveness. In every enterprise, whether it produces or delivers goods or services, the knowledge component is becoming the predominant element in differentiating it from its competitors. Protecting such new or original knowledge through IP is considered by industries as the key to prevent others from free riding on the success and goodwill of individuals or enterprises that first created the knowledge.

Understanding the nature, role and the various forms of the intellectual property system is vital in the development of a business. Moreover, use of IPRS as an integral part of business strategy is gaining importance for commercial success in the marketplace.

The most important IPR is patents. However, major international R&D organisations and multinationals build a fortress of various types of IPR's around their invention to supplement the patent protection. For example Colgate will file a product patent for the new chemical material for the bristles in their tooth brush, they will also file a process patent for the manner of manufacture of that material, they would also register the design of the handle for aesthetic purposes, they would also register a trade mark such as "Colgate – Child", signifying that, the new tooth brush is most suitable for children, they may also register the packaging as a design, and copyright the slogan used for advertising the new child friendly toothbrush.

1.2 OBJECTIVES

After reading this unit, you should be able to:

- analyze the historical background of patents in India, and in other countries;
- explain the different types of patent;
- distinguish between what may be patented and what may not be patented;
- analyze the basic elements of patent ability in an invention;
- explain the procedure for filing a patent in India and in other countries;

- describe the steps involved in filing international applications and the cost of patenting;
- analyze the importance of patent as a source of information; and
- explain the nexus between research and development and patent with the help of case studies.

1.3 HISTORICAL BACKGROUND OF PATENTS

The world 'Patent' is derived from the Latin word 'Patere' which means, "to open". Each national Government can grant a patent to an individual, institution, or organisation, for his invention (so that others cannot sell or use the invention without the permission of the Patent Holder) but in turn for the grant of such a right, the inventor is obliged to fully disclose his invention.

1.3.1 History of Patent Law in India

The first Act related to patent rights was passed in 1856, which granted certain exclusive privileges to inventors for new methods of manufacture for a period of 14 years. This Act was found wanting and was modified several times. However, after independence a comprehensive Patent Act 1970 was passed in Parliament and came into force on 20th April 1972.

The latest amendment to the Indian Patent Act become effective from 1st January, 2005, which has resulted in the Indian Patent Act to be in full conformity to the TRIPS Agreement, of which India is a signatory. While there are many amendments to the new Patent Act, the important ones relate to:

Allowing Product patents for food, Medicines, Chemicals. Prior to the amendment of 1st January 2005, India, as a developing country, granted only process patents for food, medicines and chemicals. The Indian industry was, therefore, free to develop and exploit new products, provided the Indian Industry filed and obtained process patents for such patented products. This was one of the patent policy measures that allowed the Indian Pharmaceutical industry to flourish in the last two decades. But, after India signed the TRIPS Agreement, which was a part of the larger Agreement on WTO in 1995, the Indian Pharmaceutical industry realized that if they are to compete successfully in the global market place, they will have to develop new products and increase their spending on R&D.

Increasing the validity of both the product and process patents to a uniform period of 20 years in conformity with the TRIPS Agreement. (Earlier the validity of patents was generally 14 years, but in the case of process patents for food, medicines, chemicals, it was only 5 to 7 years.

Reversal of burden of proof. Earlier responsibility for providing proof of infringement in process patent was on the patent owner and not on the infringing party. Now if the product obtained by the process is same infringer must provide proof that it is made by different process.(sec104A)

Removal of License of Right. Under this licensing provision all patents relating to food, drugs and chemicals were automatically endorsed with license of right which means these patents are eligible of grant of license to any party without the consent of the patent owner. This provision has now been removed.

1.3.2 History of Patent Law in Other Countries

While the exact date of the first patent being granted in any country is not certain, according to a published report (R. Baker, New and Improved British Library Board, UK), it was granted to Filippo Brunelleschi in the Republic of Florence in 1421. He was given a 3-year monopoly for his invention relating to a special hoisting gear used on barges. Incidentally, Abraham Lincoln, the first President of USA was one of the first few persons in independent USA to obtain a patent and that too was related to barges.

In England the first patent was granted in 1623 for a period of 14 years. The status of the enactment of patents legislation in other countries is as follows:

| | |
|--------|------|
| USA | 1770 |
| France | 1791 |
| Russia | 1812 |
| India | 1856 |

Self Assessment Question

(Spend 3 minutes)

1) What are the rights included in the definition of Intellectual Property Rights?

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1.4 TYPES OF PATENTS

Patent means, the grant by a government or the sovereign of the country to one or more individuals for a limited period of time, the exclusive rights of making, selling or using the invention for which a patent has been granted and also the right to, by the holders of such a right, for authorizing others to do so, under license. In practice, it is a negative right, which prevents others from using the invention without the legal consent of the patent holder(s).

There are four major types of Patents

- **Standard Patent**

It is also termed as an ordinary patent in some countries.

- **A Patent of Addition**

A Patent of addition is for the improvement in or modification of an invention for which a patent has already been applied for or granted. A patent of addition remains in force only as long as the patent for the original invention remains in force (no renewal fees are payable in respect of the patent for addition).

In case the original patent is revoked, the patent of addition, may be made an independent patent, by the authority ordering the revocation and it will continue thereafter, subject to the payment of the prescribed renewal fees.

- **Utility Model Patents**

These are patents granted, in some countries such as Australia, China, Japan, etc (unfortunately still not, in India) for simple devices such as a remote light pointer used in power point presentations in conferences; a plastic encased alarm clock invented by a NRI student in USA, that literally walks away after the person who has been awakened shuts off the alarm, but starts ringing again after a few minutes to ensure that the person has not again gone to sleep; all kinds of toys, household goods, etc.

- **New use Patents**

These are patents granted for new uses discovered or developed for an existing patented product and are particularly important in pharmaceutical products where a patented new medicine is found to be effective for controlling or treating another disease, during the post clinical marketing trials. For example the once a week, non hormonal, Centchroman contraceptive pill for women, developed by the Central Drug Research Institute, Lucknow was also found to be effective in reducing breast cancer, and it was licensed to a French Company for this new use. There are many other patented products like Teflon, laser, high-energy magnets, etc which have found use in different industrial sectors and in new applications over a period of time. New applications are being discovered for lasers every year, the latest being its application in the treatment of myopia and dental cavities. You can now buy patented Teflon coated leather products, which retain their shine and luster for many years.

However, it may be noted that the grant of patent rights to the inventor or his legal heirs, is on the condition, that the inventor shall in exchange, fully disclose his invention in the patent application for the benefit of other researchers who can develop or discover other new products or applications based on the information contained in the patent documents of the invention.

1.5 WORLD PATENT

There is no world patent. The popular term "World Patent" is based on a fallacy. It is a misconception prevailing in the minds of people.

Patents are valid only in the territorial jurisdiction of a country, which means that a patent granted in India is valid only within the territorial boundaries of India and not valid in any other country. In case an inventor wishes to seek protection in other countries he has to apply in that country for patent protection, follow their rules and regulations and secure a patent grant for his product or process in that country.

It is extremely important to note that once a patent has been granted in any one country in the world, it becomes prior art and consequently is deemed to be in the public domain, in all other countries where the patent application, was not filed within the time stipulated that is 12 months from the date of filing the patent application in any one country, unless a convention application /PCT application is filed within 12 months. Thus, any person residing in the countries where the patent has not been filed can exploit

it. Such a novel arrangement would prevent others from utilizing the used bottle to repack spurious products: In such a case the inventor could possibly apply for:

- The registration of design of the bottle itself as a product.
- A patent for the chemical composition of the tamper proof ring on the cap.
- A process patent for the method of injection (blow) molding of the bottle.

1.7 THINGS THAT CANNOT BE PATENTED

Notwithstanding the basic elements of patentability, most countries, including India do not consider the grant of a patent for:

- i) An Invention which is frivolous or which claims anything obviously contrary to the well established natural laws; (Different type of perpetual motion machines, machines or devices which violate the third law of thermodynamics)
- ii) An Invention for which the primary or intended use would be contrary to law, public order or morality or causes serious prejudice to human, animal or plant life or health or to the environment or which is injurious to public health; (Counterfeiting machines or making of brown sugar)
- iii) The mere discovery of a scientific principal or the formulation of an abstract theory or discovery of any living thing or non-living substance occurring in nature. (Theory of Relativity, Raman Effect, Palmistry or Astrology)
- iv) A substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such admixture; (Combiflam containing paracetamol and ibuprofen)
- v) The mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way; (Fixing of a fan under an umbrella _ both are independent devices working independently, hence not patentable)
- vi) Any process for the medicinal, surgical, curative, prophylactic, or other treatment of human beings or any process for a similar treatment of animals or plants to render them free of disease or to increase their economic value or that of their products. (cosmetic surgery, removing dental plaque, Multi Therapy drugs now being used for treatment of AIDS – is a method of administration of medication and hence not patentable)
- vii) The Indian Patent Act stipulates that no patent shall be granted for the inventions which in the opinion of the Central Government are useful for mining, extraction, production, physical or the chemical treatment, lubrication, enrichment or use of any prescribed substance or radioactive substance or for the ensuring of safety in atomic energy operations. No patent shall be granted in respect of an invention relating to atomic energy.
- viii) Inventions, products, processes and technology concerning the use of such products by the defence forces of a country such as atomic weapons, chemical or biological warfare weapons, explosive devices, mines, detonators, etc. It may, however be noted that there are many inventions that have dual use, both in the defense/strategic sector and the civilian sector. These dual

use inventions/technologies are patentable but only to the extent of their application in the civilian sector.

- ix) A method of agriculture or horticulture.
- x) 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.
- xi) A mathematical or business method or a computer programme per se or algorithms. (These are patentable in US and some other countries)
- xii) A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions
- xiii) A mere scheme or rule or method of performing mental act or method of playing a game
- xiv) A presentation of information
- xv) Topography of integrated circuits
- xvi) An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components
- xvii) The mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant. **However, it may be noted that most developed countries do not link grant of patent to efficacy and they also allow patents for first or second new use. Discovery of new property is not allowed in view of inherency in many countries.**

1.8 BASIC ELEMENTS OF PATENT ABILITY IN AN INVENTION

It must be:

- New
- Useful and
- Non-obvious

These aspects are explained below in detail with some examples:

a) **Invention must be new: Novelty**

- The invention must be the first of its kind in the world (not only in the country where the patent has been filed).
- It must have an element of something different from what has been done before.

- An invention is novel when it has not been publicly disclosed anywhere in the world on the date of filing the application. Example: The recent grant of patent in the USA for turmeric products for its wound healing properties was successfully opposed by CSIR on the grounds that there was no novelty in the invention, as there was a great deal of published Indian literature indicating that turmeric preparations have been made and used for wound healing in India since times immemorial. Therefore, that patent was revoked on review.
- It may be noted that the disclosure of the invention to the public by the inventor himself, before his filing a patent application can destroy the novelty. However, most countries allow a grace period provided the patent application is filed within 6 to 12 months from the publication of the invention, or its demonstration in Seminars or Trade Fairs/ Exhibitions.

b) Usefulness:

The invention should be useful and do what it claims to do. For example: if one was granted a patent for a new type of aircraft, but if that aircraft cannot fly, the courts would hold the patent to be invalid.

Further, the Usefulness or Utility of the invention is evaluated in terms of the feasibility of its industrial application which means that it should be possible by using the invention in producing a new product, material, compound, or substance, etc.

c) Non-obviousness:

The invention must be non-obvious to a person skilled in the art to which the invention relates. It must show ingenuity.

For Example:

- Combining two compounds, to prepare a new ingredient to have the desired result will be obvious.
- Detonator Composition: By just changing the composition ratio it can have a better effect, but it could have been done by anybody who is skilled in that field.
- However, if Teflon coating, which has hitherto been used in the coating of nonstick pans, were successfully applied on leather products to produce a better product, it would be patentable.
- The telephone is an excellent example of an invention that has been subjected to the non-obvious test. On March 7, 1876 Alexander Graham Bell's patent was granted covering "The method of, and apparatus for, transmitting vocal or other sounds telegraphically by causing electrical undulations, similar in form to the vibrations of the air which constitute the vocal or other sounds". However, although the telephone had not previously existed, people already knew that sound is transmitted in waves, undulations, or vibrations that go through the atmosphere. Hence, there was a debate as to whether the waves of electrical current transmitted through the wires of Bell's invention were non-obvious because of the concept of the existence of sound waves in the atmosphere was already known. It was finally agreed that the invention should be accepted and a patent was granted.

d) First to file or First to invent (Keeping a Laboratory Notebook)

This is another ground where a patent application may be rejected in some countries like US, Australia, Canada, etc.

In the USA, the patent law specifies that the rights to a patent belong to the person who was first to invent the product or the process and not to the person who first filed the application. But for this to be established, the inventor is required to maintain a Laboratory Notebook to establish the priority of his claims. However, there are many procedural requirements for maintaining a Laboratory Notebook.

A few essential features are given below, but the list is by no means exhaustive.

- The laboratory manual/notebook must be hardbound so that it cannot be tampered with and the pages should be numbered.
- It must have a title page showing when it was issued.
- Every laboratory notebook should be numbered. This is to be followed by a "preface" recording relevant details of the inventor such as his
 - Name,
 - Department
 - Project commencement date,
 - Co-workers,
 - Record of previous notebooks where progress was recorded, etc.
 - Every page has to be dated and the entries signed by the inventor, with each page countersigned by an independent witness.

Term of a patent

Subject to the provisions of the Indian patent Act and the amendments thereof, the term of every patent which has not expired and has not ceased to have effect (due to opposition or court orders), shall be 20 years from the date of filing of the application for the patent. Further a patent shall cease to have effect on the expiration of the period prescribed for the payment of the renewal fees, if that fee is not paid within the prescribed period (or such extended period as may be prescribed)

It may, however, be noted that the validity of a Patent is not guaranteed

- No existing patent system guarantees absolute validity of a patent when granted.
- The Act provides for search among the records of patent offices based on the published material available with them
- Such search, can never be final or exhaustive as was proven in the case of the controversial turmeric patent granted by the US patent office, as many of its claims were subsequently revoked.
- The question of obviousness or inventiveness has to be judged from the point of view of a man skilled in the art, which requires evidence of experts. This can generally be resolved only in opposition or revocation proceedings.

1.9 PROCEDURE FOR FILING A PATENT IN INDIA

The various steps involved in filing, publication, request for examination, examination, grant of a patent are briefly given below:

- Filing of Application

The patent application has to be filed by the inventor(s), or an assignee of the inventor(s), legal representative of any deceased person who is entitled to make such an application before his death, a patent attorney on behalf of the inventor(s) to the appropriate Patent Office, which is in his territorial jurisdiction. There are four regional offices authorized to accept the patent applications, and these are located in New Delhi, Chennai, Mumbai, and Kolkata. The addresses and their territorial jurisdiction, etc can be found in the Indian Patent office website. The patent application in the prescribed form, accompanied by the requisite fees, has to be filed along with the Provisional and, if possible, complete specifications.

- Filing of the Complete Specifications

If, the complete specification has not been filed at the time of first filing, (which is usually the case), the complete specification must be filed within 12 months from the date of filing of the provisional specifications. The period can be extended by 3/6 months by making a request on the prescribed form 5 (along with the prescribed fees). If the complete specification is not filed within the prescribed period, the application shall be treated as deemed to have been abandoned and no further action would be taken by the Patent Office thereon.

- Notification in the Patent office Journal

- After the application is filed with the required documents and fees, the date of application is allotted and the application is published after 18 months in Patent office Journal. The copy of the application and specification is made available to the public through Patent Office website. The contents of the specification are kept confidential upto the date of publication.

- Request for examination

The applications are not examined till the request for examination is made. Request for examination can be made by any person or the applicant within 48 month from date of application. If no request is made within the prescribed time the application is treated as deemed to have been withdrawn.

- Examination of Patent Application

The examination of patent applications is taken up in the Patent Office only after request for examination is received. The applicant has to respond within 12 months of the First examination report.

- Grant of patent

If the application is found to be in order, patent is granted by allotting a serial number. Grant is then notified in the Patent office journal available on its website. After publication patent specification and other documents relating thereto are made available to public. The applicant receive a patent certificate giving details of the patentee title of the invention, date of grant. The entry of the grant is also made in the register of patent.

- Opposition against grant of Patent.

Pre-grant opposition by way of representation

Any person can file an opposition by way of representation to the controller any time after publication and before the grant against the grant of the patent. He must file evidence in support of his opposition and may seek hearing. After hearing the patent applicant and the opponent Controller may either reject the representation and grant the patent or accept the representation and refuse the grant of patent on the application.

Post Grant opposition

Any interested person can give notice of an opposition on Form 7 to the Controller with 12 months from the date of publication of the grant of patent. This opposition is referred to an Opposition Board constituted by the Controller. On receipt of the recommendation of the opposition board and after hearing patentee and the opponent Controller may either maintain, amend or revoke the patent.

It may be noted that the entire process from filing a patent application to the grant of the patent is complex and highly legal not only in India but in other countries as well, and therefore services of a Patent Attorneys are invariably taken to process patent applications in the patent office. Please note that here is a separate Unit on this subject, namely Unit no. 5.

Self Assessment Question

(Spend 3 minutes)

- 3) What is the duration within which a party can file an opposition against the grant of the patent and can it be extended?

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1.10 FILING PATENT APPLICATION IN OTHER COUNTRIES

The first step (for our Indian inventors) for obtaining patent protection in several countries is generally to first file a provisional patent application in one (the one applicable as per jurisdiction), of the four Regional Patent Office in India.

Thereafter, the inventor has two distinct options.

* Option No. 1:

To file a separate patent applications in each convention country that he feels have potential for commercial exploitation of his invention. In this respect he has to file the patent application within 12 months of the filing of the Indian patent application.

* Option No. 2:

It is important to note that as per option No2, instead of filing separate patent applications in each of the select countries that have potential for the invention, a single PCT application can be filed before the expiry of the 12 months period after having filed the Indian Patent Application.

The PCT application route is for obtaining the **priority** for grant of patents in 144 countries (as of May 2012) including India. A single PCT application can be filed, which automatically designate all the member countries where the applicant file national application for grant of patent. This in one way defers his expenditure for three to four years. It also staggers the expenses of filling application in many countries which otherwise are required to be incurred immediately before 12 months. The PCT applicant also gets the benefit of International search report with written opinion relating to novelty / prior art which is made available to the applicant within 18 months. Further, by requesting an international preliminary examination, the applicant will have the opportunity to argue and/or amend the application in the light of the objections to patentability, if any, with a view to obtaining a clear preliminary examination report. He may opt to abandon his application if he finds the adverse ISA And IPER. This will save him from incurring cost in unnecessary litigation.

However, before the expiry of the 30 or 31 months period (after the date of filing of the Indian application), separate national or regional patent application(s) **must** be filed by making additional payments of the usual fees prescribed by each country.

1.11 STEPS INVOLVED IN FILING INTELLECTUAL APPLICATION

- File a national application before the National Patent office or the International Bureau of WIPO.
 - File a PCT application in 3 copies within 12 months.
- Of the 3 copies, one copy is retained by the National office, 2nd copy is sent to WIPO and the 3rd copy is sent to International searching authorities (ISA) such as European Patent Office, Austrian Patent Office, US Patent Office, Australian Patent Office, China Intellectual Property Office, Swedish Patent Office. Within 9 months the search report is ready and communicated to the applicant by the 12th month.
 - Between the 9th to 18th months, while the application is being processed the inventor/institution can carry out market research, identify potential licensees and decide the strategy of where to file, whether to share future patenting costs with potential clients etc.
 - Within 18 months of filing, WIPO shall inform the various patent offices.
 - After the 20th month one can demand for preliminary examination made Competent International Preliminary Examining Authorities [IPEAs] are European Patent Office, Austrian Patent Office, US Patent Office, Australian Patent Office, China Intellectual Property Office, Swedish Patent Office.
 - International Preliminary Examination report to assess the novelty inventiveness as well as industrial application of the invention. The report is available with written opinion within the next 10 months.
 - Within 30 months one has to not only take a decision as to the countries where the patent application is to be filed, but also to file the same.
 - There are various provisions to extend the deadlines in the PCT route, but these applications for extensions have to be justified on valid grounds

The List of PCT Fees, for Indian Applicants to be paid at Receiving Offices in India while applying for PCT applications (from 01/01/2011)

Transmittal and International filing fees#

| (Amounts as on 01/01/2011) RO | Transmittal fee | International filing fee | Fee per sheet over 30 | PCT-EASY reduction | Competent ISA(s) |
|-------------------------------|--|--------------------------|-----------------------|--------------------|----------------------|
| IN | INR 8,000 INR 2,000 (Filing by Individual) | USD 1367* | USD 15* | USD 103* | AT AU CN EP SE US |

Fees for preparing certified Priority Document and transmission to IB of WIPO Rs. 4000/- (For Individual Rs.1,000/-).

International Search fees# (from 01/01/2011)

| ISA | Search fee(USD) |
|-----|-----------------|
| AT | 2326**** |
| AU | 1837 |
| CN | 314 |
| EP | 2,443**** |
| SE | 2,443**** |
| US | 2,080 |

International Preliminary Examination fees*** (from 01/01/2011)

| IPEA | Preliminary Examination fee | Handling fee* |
|------|-----------------------------|----------------|
| AT | EUR 1675 | EUR 150 |
| AU | AUD 550** 780 | AUD 213 |
| CN | CNY 1,500 | CNY eq CHF 200 |
| EP | EUR 1,760 | EUR 150 |
| SE | SEK 5,000 | SEK 1,390 |
| US | USD 600** 750 | USD 206 |

Payable to RO/IN [CHENNAI, DELHI, KOLKATA, MUMBAI as per applicable Jurisdiction].

* The fee is reduced by 90% where applicant or each applicant (where two or more applicants) is a natural person and is a national of and resident in India.

** This amount will be applicable when Search is done by the same ISA.

*** Payable to IPEA in the currency prescribed by it.

**** The fee is reduced by 75% where applicant or each applicant (where two or more applicants) is a natural person and is a national of and resident in India.

Note - For further information in respect PCT related matters, students are advised to visit WIPO Website at <http://www.wipo.int/pct/en/>

1.12 COST OF PATENTING

* In India

Some of the selected fee details

| Form No. | Amount of fees (in rupees) | |
|----------------------------------|---|---|
| | Natural Person | Legal Entity other than natural person(s) |
| 1 Application | 1000 - Multiple of 1000 in case of every multiple priority. - 100 (each sheet of specn. -in addition to 30) - 200 (for each claim in addition to 10) | 4000 - Multiple of 4000 in case of every multiple priority. - 400 (each sheet of specn. -in addition to 30) - 800 (for each claim in addition to 10) |
| 2 Complete specification | No fee - 100 (each sheet of specn. - in addition to 30) - 200 (for each claim in addition to 10) | No fee - 400 (each sheet of specn. - in addition to 30) -800 (for each claim in addition to 10) |
| 3 Undertaking U/S8 | No fee | No fee |
| 4 Extension | 300 per month | 1200 per month |
| 5 Declaration of inventorship | No fee | No fee |
| 6 | 500 | 2000 |
| 7 Opposition | 1500 | 6000 |
| 8 | 500 | 2000 |
| 9 | 2500 | 10000 |
| 10 | 1500 | 6000 |
| 11 | 1500 | 6000 |
| 12 Request for publication | 1500 | 6000 |
| 13 Amendments | 500 1000 200 | 2000 4000 800 |
| 14 | 1500 | 6000 |
| 15 Restoration | 1500 | 6000 |

| | | |
|------------------------------------|--------------|----------------|
| 16 | 1000 | 4000 |
| 17 Compulsory license | 1500 | 6000 |
| 18 Request for Examination | 2500 3500 | 10000 14000 |
| 19 | 1500 | 6000 |
| 20 | 1500 | 6000 |
| 21 | 1500 | 6000 |
| 22 Patent agent registration | 2000 | No fee |
| 23 | 1000 | No fee |
| 24 Review | 1000 | 4000 |
| 25 | 1000 | 4000 |
| 26 Authorisation | No fee | No fee |
| 27 Statement of working | No fee | No fee |

Renewal fee payable in advance for every block year stating from 3rd year

| Year | Natural Person | Legal Entity other than natural person(s). |
|--|----------------|--|
| • Renewal of patent in respect of 3 rd to 6 th year. | 500/year | 2000/year |
| • Renewal from 7 th to 10 th year. | 1500/year | 6000/year |
| • Renewal from 11 th to 15 th year | 3000/year | 12000/year |
| • Renewal from 15 th to 20 th year | 5000/year | 20000/year |

Cost of filing patents in other countries

At the outset it must be understood that the cost of filing patents particularly abroad can be very expensive. The benefits of filing a PCT application have been discussed in the earlier section. But please note that the PCT allows one to only claim priority in the convention countries. One still has to ultimately file applications in each country where the patent is to be protected.

The approximate **initial** cost of filing a Patent Application abroad in some of the major countries is given below:

| Countries | Amount (In Rs.) |
|------------|-----------------|
| Australia | 60000 |
| Bangladesh | 15000 |
| China | 100000 |
| Indonesia | 40000 |
| UK | 90000 |
| USA | 80000 |
| Malaysia | 30000 |

Note - The overall total cost for obtaining the patent is much more, generally 4 to 5 times the cost of the initial filing costs indicated above.

IN COMPARISON THE COST OF FILING PCT APPLICATION IS ONLY AROUND Rs 150,000

It is once again reiterated that the most significant advantage of the PCT route is that it facilitates an inventor or the concerned Institution in formulating an effective patenting strategy: where to file, what to file, when to file and whether to proceed ahead with the application or abort the same at various stages. The intervening period is available to the inventor to identify potential clients (not only for licensing of the patented invention but also of sharing the future patenting costs with such clients) and last but not least to abort further patenting activity if the R & D work (testing of samples, toxicology/clinical trials, etc) is not giving the desired results.

1.13 PATENTS AS A SOURCE OF INFORMATION

*** Importance of Patent Information**

It is unfortunate that most of the scientists in India are not aware of the enormous Technical information which is available through international patent searches on internet (free of cost) and through structured patent searches from specialized agencies such as Devenet. The Author has been a member of over 15 major committees of various Government Ministries and of Financial Institutions, and to his surprise only in, one out of 100 research projects a researcher presents, the details of the State-of-Art of the technology on the basis of an international patent search that he has carried out are given in the proposal or presented when he is given an opportunity to do so before the Project Appraisal Committee. More often than not, he is only preparing to develop, what has already been patented abroad. This has to change, if Indian scientists are to develop new cutting edge technologies.

On the other hand, the small and medium scale industries (SMES) in India do not realize that they can have access to very valuable information pertaining to their line of business through patent searches. There are over one million patents, for which the validity has expired. There are many other patents which were not filed

in India, and which can be exploited / copied by them for enormous benefit for upgrading their manufacturing processes or replicating commercially successful products, without any legal complications.

To cite an example: a lady entrepreneur in Ferozabad was manufacturing artificial glass cut crystals for use in cuff links, artificial jewellery products, etc.; but the quality of her products was inferior to the ones manufactured in Japan, China and Europe. At her request, the author carried out an international patent search. The patented information in the know how, contained in the Czechoslovakian patent (which was granted in 1972 and for which the validity had expired – what is more it was not filed in India at all) were supplied to her and she was able to upgrade her process to produce products of the same quality as that of China, Japan etc. As a result her profits doubled.

* **Some of the salient features of International Patent Search Information are given in the Table below:**

- | |
|--|
| <ul style="list-style-type: none"> ● A large number of technologies are disclosed in patents, the details of which were never published. ● Over 1 million patents are not valid as the validity period has expired or they have not been filed in India. ● Information in the patents is written in a standard format, hence the retrieval of the required information is easy and cost effective. ● Patents are source of the latest information in the relevant sector-not publications. ● All stakeholders, scientists, inventors, consultants, businessman, patent attorney, industries, investors, stockbrokers etc. can benefit from patent information. ● Patent information provides the scientist/inventor with the details of the State of Art of the technology worldwide, facilitating new research. |
|--|

Sources of Patent Information

Information on Indian and foreign patents is available at the patent information system (PIS) in Nagpur, from NRDC in New Delhi, the Patent Facilitation Center (PFC) of the Department of Science and Technology, the National Information Center (NIC), New Delhi, the Patenting Cell of CSIR, etc.

The major Private data bases which are available online on payment for retrieval of International Patent Information Data are:

- DERWENT
- STN(to be subscribed)
- Orbit (to be subscribed)

Free Data bases of the patent office

- INAPADOC (bibliographic data)
- USPTO
- JPO
- Chinese Patent Office

- Australian Patent Office
- UK Patent Office
- European Patent Office
- Singapore patent office
- Indian patent office

Online searches can be carried out by Patent number, publication or priority date, names of inventor, assignee or attorney, title of technology (using key words), technology classification etc. Copies of the patent are also available. In some countries legal status of the patent can also found.

1.14 RESEARCH AND DEVELOPMENT AND PATENT CASE STUDIES

General

This is the most important section in this Unit. It will help you in kick starting the thinking process of the entire gamut of the process of Patent Management. It will also help you in linking the R & D efforts, methodology of generation and identification of new ideas and the possible types of Patents and other IPR's that can be used to protect such ideas, identifying the same and taking appropriate measures at the right time, in the right country and at the minimum cost to protect the products and processes resulting from the R & D efforts by patenting or through the PCT route.

Please remember, that just as R & D generates new patents, the reverse is also true, new patents in one field generate new ideas, new applications and new products in other fields, sometimes in totally unrelated fields.

No perfect product has been developed in any sector; it can always be improved through technology. The closest perfect examples perhaps, are the creations of God - the plants, the animals and last but not least the human beings. Even in these cases, genetic / stem cell research is changing the world as we know it.

The following examples spread over a few industrial sectors, illustrate the concepts involved and the methodology, that can be adopted, to stay ahead of your competitors in the global market place.

Case studies of hypothetical (but possible) new products:

In each of these cases you are required to answer the following three questions:

- i) Which are the types of Patent/ IPR's are possible.
- ii) In which countries
- iii) What should be the strategy for Patent/ IPR protection

Please note that as in real life there is no single solution to a particular problem, multiple solutions and options are possible. These cases are meant to stimulate your thinking on IPR and patent issues. These exercises can be used in various R&D Institutes and industries for the purpose of brainstorming and training not only for IPR matters but also for idea generation. No hints or answers are given, as they would not be precise.

1.15 SIMPLE INVENTIONS

i) Steel broom

You have seen the traditional brooms made of bamboo or other wooden sticks. The wooden sticks tend to break, and the life of the broom is very limited though it is of low cost. You also have seen in the market the round steel wire woven scrubber used for cleaning utensils. You have a new idea for developing a steel wire broom incorporating some of the features of the steel wire scrubber and the existing methods of its manufacture.

ii) Emergency ceiling fan

Power supply in India, whether in homes or offices is very unreliable. This has resulted in the development of many types of emergency lights, but no emergency fans (though the Chinese have reported to have developed one). You want to develop an emergency fan incorporating some of the existing features of the fans available in the market and the emergency lights, but with an additional remote control feature, for not only switching the fan on or off but also for its speed adjustment by utilizing a part of the electric circuit diagram used in TV remote control devices. What are the Patent issues involved?

iii) Self-Lighting Cigarette

Normally a smoker uses a matchstick or lighter to ignite a cigarette. You want to develop a cigarette, whose tip is akin to that of a matchstick along with the cigarette packet having on its side the rubbing strip for igniting the cigarette. What firstly are the R&D issues and what would be the different types of patents possible?

iv) Luggage Trolley which can also be used as a stool

Everyone has observed the incremental innovations that have taken place in the design of luggage trolley bags. Initially designs came up with four wheels but they were cumbersome, one had to bend to pull the trolley. The design of the modern carry cum trolley is an excellent example of incremental innovation. It started off with the two wheel suitcase and trolley which evolved into flexible height handles.

1.16 NEW CHEMICAL PRODUCTS

i) Polymer based coating for bath tubs

As a polymer engineer you have observed that in about two to three years time the coating on most bathtubs either wears off or chips. On the one hand one does not wish to throw away the tub as it is functionally all right, but on the other hand the bathtubs aesthetic looks have been adversely affected. You are successful in developing a quick cold setting formulation that can be sprayed like a paint (after cleaning the surface with an acid) on the surface of the bath tub making it look almost new at a very reasonable cost. What is more you discover that with a few modifications like applying a base coat on the walls one could also have a marble like coating on the walls of the bathroom or other rooms at a fraction of the cost of installing marble wall tiles. The only problem is that the formulation has to be mixed on the spot

just like in the case of araldite adhesive. What are the patent issues involved?
What could be the business plan incorporating the Patent

- ii) Chemical Solution to remove ink from printed matter such as newspapers, magazines etc.

1.17 OTHER EXAMPLES

- Washing machine using ultra sonic cleaning technology, fuzzy logic, microwave drying, re-use of water etc.
- Vehicle (GPS, Peltier effect, puncture indication device, collision protection, personal safety locator, prevention of use of mobile phone by driver.
- Recycling of printed-paper.
- Energy saving devices/methods
- Photocopying machine for copying any matter or image on cloth.

1.18 SUMMARY

- The IP protection laws are strength as they not only intend to benefit the creation of the new product but the creations on the new product but also encourage the same for further research and development activities for benefiting the society at large.
- The definition of Intellectual property rights is inclusive and includes the rights relating to literary artistic and scientific works, performances of performing artists, phonograms and broadcasts. It also include in it inventions in all fields of human endeavor, scientific discoveries, industrial design, trademarks services marks and commercial moves and designations and protections against unfair competitions.
- The different types of Intellectual Property Rights include industrial property, copyrights and related rights and other IPs which include the rights of the traditional knowledge holders and protection of valuable data.
- The different types of patent include standard patents, a patent of additions, utility model patent and new use patents.
- The basic element of patent ability of an invention an that (a) it must be new (b) must be useful and (c) must be non obvious.
- Patent can be used as a source of information. There is enormous technical information available through international patent search on internet (free of cost) and through patent searches from specialized agencies such as devenet.
- Research and development generates new patents and new patents in one field generate new ideas, new applications and new products in other fields.

1.19 TERMINAL QUESTIONS

- 1) Compare the history of patent in India with the history of patents in other countries?

- 2) Explain the inventions that may be patented and the ones that may not be patented with reasons?
- 3) Discuss the procedures for filing a patent in India?

1.20 ANSWERS AND HINTS

Self Assessment Questions

- 1) The definition of IPR includes in it the rights relating to literary, artistic and scientific works, performance of performing artists, phonograms, and broadcast, inventions in all fields of human endeavor, scientific discoveries, industrial designs, trademarks services marks and commercial names and designations, protections against unfair competition. Thus, it includes all rights resulting from Intellectual activity in the industrial, scientific, literacy or artistic fields.
- 2) Patent are valid only in the territorial jurisdiction of a country, i.e. a patent granted in India is valid only within the territorial boundaries of India and not valid in any other country.
- 3) Any party can file an pre grant opposition against the grant of the patent by filing representation to the controller after the publication of the application but before the grant of the patent.
- 4) Only a 'person interested' can file opposition against the grant of the patent by filing notice of opposition to the controller within one year from date of publication of grant of patent.

Terminal Questions

- 1) Refer to Sub-section 1.4.1 and 1.4.2
- 2) Refer to Sub-section 1.5.2 and 1.5.3
- 3) Refer to Section 1.6

1.21 REFERENCES AND SUGGESTED READINGS

- 1) The Indian Patent Act as amended unto 1st January 2005
- 2) The USPTO
- 3) The Australian Patent Office
- 4) The WIPO Patent Site
- 5) The European Patent Office

UNIT 2 TERMS AND DEFINITIONS

Structure

- 2.1 Introduction
- 2.2 Objectives
- 2.3 Inventions
- 2.4 Inventive Steps
- 2.5 Capable of Industrial Application
- 2.6 New Invention
- 2.7 Priority Date
- 2.8 Pharmaceutical Substance
- 2.9 Patent
- 2.10 Patentee
- 2.11 Patent of Addition
- 2.12 Person and Person Interested
- 2.13 Appellate Board
- 2.14 Assignee
- 2.15 Legal Representative
- 2.16 Budapest Treaty
- 2.17 Patent Cooperation Treaty
- 2.18 International Application
- 2.19 Convention Country
- 2.20 Summary
- 2.21 Terminal Questions
- 2.22 Answers and Hints

2.1 INTRODUCTION

Section 2 of the Patents Act 1970, as amended in 2005 provides the statutory definition of terms, used in the Act. These terms are to be interpreted in the context of the Patents Act. The most important terms defined in the Act are: 'invention', 'inventive step', 'capable of industrial application', 'new invention', 'pharmaceutical substance', 'priority date', 'international application', 'patent of addition', 'Appellate Board', 'patentee', 'convention country' and other terms.

2.2 OBJECTIVES

After reading this unit, you should be able to :

- explain under what condition a patent is granted for an invention;
- discuss the term ‘inventive step’;
- analyze the phrase capable of industrial application, new invention, with examples;
- discuss the term priority date of a patent;
- explain pharmaceutical substance, patent, patentee and patent of addition;
- well acquaint be with other patent related terms like assignee, legal representative etc.;
- explain the treaties like Budapest treaty, patent co-operation treaty; and
- describe what an international application is and what is meant by a convention country.

2.3 INVENTIONS

Section 2(1)(j): “invention” means a new product or process involving an inventive step and capable of industrial application.

A patent is granted for an invention in respect of which the following conditions are satisfied, that is to say –

- a) The invention is new;
- b) It involves an inventive step;
- c) It is capable of industrial application.

The TRIPS agreement in Article 27.1 provides that “patents shall be available for any inventions, whether products or processes ... provided that they are new, involve an inventive step and are capable of industrial application.” The terms ‘inventive step’ and ‘capable of industrial application’ are synonymous with the terms ‘non-obvious’ and ‘useful’ respectively.

Invention is the act of operation of finding out something new, which is not a discovery; the process of contriving and producing something not previously known or existing, by the exercise of independent investigation and experiment; also the product or contrivance (device) so invented.

While the terms ‘inventive step’ and ‘capable of industrial application’ have been defined, the Act does not provide any definition of ‘novelty’.

Novelty, over the prior art, is a fundamental requirement in any examination of an invention for patent and is an undisputed condition of patentability. Patents are not granted for inventions that are already known. Accordingly, the present law requires a patented invention to be new in the sense of forming no part of the state of art, i.e. it must not be claimed earlier, that is, it is not to be found at the priority date in any matter (whether a product, a process, or anything else) which has at any time been made available to the public anywhere in the world by written or oral description, by use, or in any other way. The technology in the invention or information should not have fallen into public domain. This concept of novelty

does not make a distinction between information published by the inventor or by someone else unconnected to him. However, it may be noted that novelty is not something which can be proved or established; only its absence can be proved.

Prior claiming may arise in three situations: First, where the earlier claim lies wholly within the area of the later claim; secondly, where the areas of the earlier and later claims overlap; and thirdly, where the earlier claim is broader than and includes the area covered by the later claim. While the first two can be addressed by amending the claims, in the third case, difficulties may persist.

An invention is taken to be new if it does not form part of the state of the art, that is, it is not anticipated by the prior art. Anticipation can be by way of prior public use or prior publication, 'Publication' means 'making publicly known' and 'publish' means 'make generally known'. The working of the invention commercially before the priority date in India also amounts to anticipation except for purpose of reasonable trials. A prior document relied upon must contain a clear and specific disclosure of what is claimed in the specification. If it is shown that carrying out the directions obtained in the prior specification would result in the claimed product, the prior publication is established and the patent will not be granted. If the invention claimed by the applicant in any claim was publicly known or publicly used in India or anywhere else before the priority date of the claim, it is a ground for opposing the application as it amounts to 'anticipation'. For example, in a case a patentee claimed a hay-raking machine in which the rake-wheels were turned not by engine but by contact with the ground. The patent was declined because it was anticipated by a photograph published in a journal, showing the hay-rake with this feature. What is not considered as anticipation is covered by circumstances provided under section 29-34.

"Prior art" refers to all the knowledge that existed prior to the relevant filing or priority date of a patent application, whether it existed by way of written or oral disclosure. The knowledge claimed in the complete specification should not have fallen into the public domain. Generally prior art is determined in the context of knowledge existing globally, which is disclosed through publications – printed, oral and by prior use, public display and public working. Section 25 (1)(b,c,d) limit the publication of the claim before the priority date to India, if it is claimed in a specification filed for a patent made in India, but if it is in any other document then its publication elsewhere also be accounted to determine the prior art. Publication in tangible form requires that there be some physical carrier, by way of a document, for the information, which is available to the public. Oral disclosure implies that the words or form of the disclosure do not exist in tangible form and not necessarily recorded as such, viz. lectures, etc. Disclosure by use is essentially a public display, working and sale and actual public use of that information. A product or process, which is the subject matter of the claim, may be publicly known without publication, either orally or through a document, by public use. Any commercial sale of a product by any trader before the priority date of the claim to that product is 'use' of that invention, notwithstanding the ignorance of the seller in this regard. Prior use must be public use and not secret use.

Lack of novelty can only be found if the publication by itself contains all the characteristics of the claim made in the patent application, that is, if it anticipates the subject matter of the claim. In considering novelty, it is not permissible to combine separate items of prior art together and novelty involves an essentially factual investigation.

Self Assessment Question**(Spend 2 minutes)**

1) When can prior claiming arise?

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2.4 INVENTIVE STEPS

Section 2(1)(ja): “inventive step” means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art.

The presence of an ‘inventive step’ is the *sine qua non* for any patentable invention. The concept of inventive step is inherent in the concept of invention and if an invention is obvious and does not involve any inventive step, it will be refused a patent. A patent can be opposed if the claim in the complete specification fails to establish an inventive step or if the invention is obvious, having regard to the matter published or used in India before the priority date (Sec. 25 (1)(e)). However, in patent examination, the most difficult standard to determine is the ‘inventive step’ (also referred to as ‘non-obviousness’). The questions which are to be answered in this regard are whether or not the invention involves –

- A technical advance over the existing knowledge, i.e. prior art; or
- have economic significance; or
- both; and
- Invention is non-obvious to a person skilled in the art.

Considerations of technical advance, as of commercial value (economic significance) become points of reference in the search for an inventive step. To establish ‘inventive step’, the invention should be an advance over the prior art, i.e., an invention should show ‘technical progress’ over the prior art, that is, it should in some practical sense be a better way of doing things. Whereas the technical advance is an element to establish inventive step in most of the jurisdictions, the ‘economic significance’ for the purposes of establishing ‘inventive step’ is typical to India. If an invention can establish a new use or new advantage of a thing over the use already known, it may well be counted as inventive.

The prior art is the same broad conception that operates in assessing novelty. In the context of ‘technical advance’, inventive step differs from novelty. Novelty exists if there is any difference between the invention and the prior art. The question of inventive step arises only once the novelty of the invention is established.

The expression 'inventive step' conveys the idea that it is not enough that the claimed invention is new, i.e., different from what exists in the state of the art, but that this difference must have two characteristics: First, it must be inventive as a result of a creative idea, and it must be a noticeable step. There must be a clearly noticeable difference between the state of the art and the claimed invention. Second, it is necessary that this advance or progress be significant and essential to the invention. Prior art as a whole should be taken into account to assess the nature of differences which are relied upon as constituting an inventive step. For example, to establish the inventive step, the claim is not compared with each publication or other disclosures separately but rather with the combinations of all and to assess whether each such combination is obvious to the person skilled in the art. For the inventive step to be denied, it is necessary that not only the combination, but also the choice of the combined elements, is obvious.

The invention must establish new use or new advantage in a thing. For example, if the problem is already known or obvious, then the invention must bear the originality of the solution claimed. If no originality is found in the solution, then the result should be original either in its nature or by its extent. If a thing is obvious for one purpose, it will not become less so because of an unexpected advantage or new use.

The originality of the claim will be tested from the standard of a person who is skilled in the art. If the invention is obvious to a person skilled in the art on the priority date of the claim, it will lack originality or improvement over the existing knowledge. To examine non-obviousness, the standard of a person skilled in the art is applied, who is supposed to be skilled technician, well acquainted with workshop techniques. It is intended to exclude the 'best' expert and highly qualified research staff on a technical problem. Such an expert is supposed to have in mind, first, the common general knowledge of his art at the priority date and, second, whatever he would learn from the existing literature when seeking an answer to the problem at issue. To assess the obviousness, by applying the test of 'person skilled in the art', the courts are left to make their own assessment after hearing what clever people have to say.

The inclusion of this requirement to establish inventive step is based on the premise that protection should not be given to what is already known as part of the prior art, or to any thing that a person skilled in the art could deduce as an obvious consequence thereof. Section 64(1)(f) of the Patents Act provides that a patent can be revoked if the invention is obvious or does not involve any inventive step, having regard to what was publicly known or used in India or what was published in India or elsewhere before the priority date of the claim.

Although 'lack of novelty' and 'obviousness' are generally adjudged in the background of the same set of circumstances, there are certain differences between the two. The scope of enquiry in obviousness is wider than that in anticipation. For determination of anticipation the courts look at the prior art as a whole having regard to everything known or used before the priority date. The courts confine themselves to looking at the particular prior documents individually in determination of anticipation. Whereas, in determination of inventive step courts may use the teachings of one or more documents to arrive at the decision relating to obviousness. Further determination of inventive step presupposes existence of novelty. In other words invention may be novel yet it may lack inventive step.

Self Assessment Question**(Spend 2 minutes)**

2) How can an inventive step be determined?

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2.5 CAPABLE OF INDUSTRIAL APPLICATIONS

Section 2(1)(ac): “capable of industrial application”, in relation to an invention, means that the invention is capable of being made or used in an industry.

An invention to be patentable must be of a kind which can be applied for practical purposes and not merely be theoretical. For example, if the invention is intended to be a product, it should be possible to make it through an industrial process. And if it is intended to be a process or part of a process, it should be possible to carry out or ‘use’ it. In other words, the invention should be ‘useful’.

The phrase, “Capable of industrial application”, reflects the possibility of making and manufacturing in practice, and that of carrying out or using in practice. It is a notional idea that it should be capable of being made or used in an industry. Practical usefulness or commercial utility of the invention does not matter, nor does it matter whether the invention is of any real benefit to the public, or particularly suitable for the purposes suggested. It is only failure to produce the results promised in the claim, that will matter in the grant of a patent. Under Section 2(8) of the Patents and Designs Act, 1911, “invention” means any manner of new manufacture and includes an improvement and an allied invention. Unlike the Patents Act, 1970, the 1911 Act did not specify the requirement of being useful or capable of industrial application in the definition of invention. But the courts have invariably taken the view that a patentable invention, apart from being a new manufacture, must also be useful. The foundation for this judicial interpretation is to be found in the fact that Section 26(1)(f) of the 1911 Act recognized lack of utility as one of the grounds on which a patent could be revoked. Section 64(1)(g) of the Patents Act 1970 also provides similarly, by stating that the invention, as claimed in the complete specification, if not useful is a ground for revocation of the patent.

The concept of industrial application is concerned in part with the categories of subject matter that fall within the sphere of patent system. It means the application (making, use) of an invention by technical means on a certain scale. The phrase is used to indicate that agriculture is an industry for patent purposes and excludes methods of treatment of humans and animals. If the invention has no known practical application at the priority date, it may be refused patent.

2.6 NEW INVENTIONS

Section 2(1)(l) – “new invention” means any invention or technology which has not been anticipated by publication in any document or used in the

country or elsewhere in the world before the date of filing of patent application with complete specification, i.e. the subject matter has not fallen in public domain or that it does not form part of the state of the art.

The definition of 'new invention' is typical to the Indian Patents Act and is not found in the patent law of any other country. It was inserted in the Patents Act in 2005. It, in fact, This provision in fact does not add any thing substantial to the definition of invention, nor does it find any mention in any provision of the Patents Act. It basically relates to the subject matter of a patent, which is any invention that has not been anticipated, i.e. it is not in the public knowledge before the date of filing of the complete specification. The technology or invention claimed should not be a part of "prior art" or has not fallen in public domain. In other words, the invention should fulfill the requirement of novelty.

'Prior art' has the same connotation as explained above in the case of 'invention' Technology falling in the public domain is known and accessible to all, hence no novelty can be claimed over that. However, in contrast to 'novelty' for the purposes of 'invention' under the Patents Act, in which the invention is adjudged in the context of a claim made in a specification before the priority date of the claim made in the complete specification or published in a document in India or elsewhere, in the case of 'new invention', the invention should not be anticipated by any publication anywhere in the world, nor it is being publicly used or known in India. The 'new invention' restricts the anticipation to the cases if where it is published in a document or through use and but does not take into account the oral disclosure. In other words the technology involved in the invention should not form part of the prior art or has not fallen into public domain, which will where it is be accessible to everyone.

2.7 PRIORITY DATE

Section 2(1)(w) – "priority date" has the meaning assigned to it by Section 11.

The "priority date" of a patent is the date on which it is tested against the 'state of the art'; and it is the date on which it, or any application claiming priority from it (if it is subsequently published), becomes part of the art, when assessing the novelty of later applications. Under the Paris Convention, the earlier application, which first disclosed the invention, must have been made within the previous twelve months to claim priority in the subsequent application. The crucial date will be the filing date of the application. It is the date on which novelty and inventiveness of the invention is tested. The invention must be novel and must possess an inventive step on the basis of the state of art on the priority date. The state of the art includes all matter (whether a product, a process, information about either or anything else) which has at any time before the priority date of the invention has been made available to the public (whether in India or elsewhere) by written or oral description, by use or in any other way.

Under Section 11, normally priority date is the date of filing a complete specification. However, where a complete specification is filed in pursuance of a single application accompanied by a provisional specification and the claim is fairly based on the matter disclosed in the specification, the priority date will be considered to be the date of filing the relevant specification, i.e. the provisional specification. To determine the priority date, section further provides that -

- Where the complete specification is filed in two or more applications accompanied by provisional specifications and the claim is fairly based on the matter disclosed in one of those specifications, the priority date will be the date of the application accompanied by that specification;
- Where the complete specification is filed in two or more applications accompanied by provisional specifications and the claim is fairly based on the matter disclosed partly in one and partly in another, the priority date will be the date of filing application with complete specification of the later date.
- Where any claim of a complete specification has two or more priority dates, the priority date of that claim shall be the earlier or earliest of those dates
- In the case of convention application (Paris Convention), if two or more applications in respect of inventions have been filed in one or more convention countries and those inventions are so related as to constitute one invention and the complete specification is based on matters disclosed in one or more of the basic applications, the priority date will be the date on which that matter was first disclosed.

The system of priority eases the pressure of an applicant to decide on the future course of action in relation to his application. In the case of convention application, the applicant may use the filing of his application in any one office of the convention to claim priority in the other countries.

2.8 PHARMACEUTICAL SUBSTANCE

Section 2(1)(ia) – “Pharmaceutical substance” means any new entity involving one or more inventive steps.

The definition on ‘pharmaceutical substance’ does not find mention in the Patent laws of most of the countries. However, the term ‘pharmaceutical substance’ is defined in Schedule 1 of the Australian Patents Act 1990 as under:

“A substance (including a mixture or compound of substances) for therapeutic use whose application (or one of whose applications) involves:

- a) a chemical interaction, or physico-chemical interaction, with a human physiological system; or
- b) action on an infection agent, or on a toxin or other poison, in a human body;
- c) but does not include a substance that is solely for use in vitro diagnosis or in vitro testing”.

The term ‘therapeutic use’ is, in turn, defined in relation to the definition of ‘pharmaceutical substance’ as “use for the purpose of:

- a) preventing, diagnosing, curing or alleviating a disease, ailment, defect or injury in persons; or
- b) influencing, inhibiting or modifying a physiological process in persons; or
- c) testing the susceptibility of persons to a disease or ailment”.

The term is thus synonymous with ‘drug’. The Act does not in fact define the term but rather provides that it is a new entity, involving inventive steps.

Section 3(d) provides that the mere discovery of a new form of known substance which does not result into the enhancement of the known efficacy of that substance or which is a mere discovery of a new property or new use for a known substance or of known process, machine or apparatus is not considered as an invention and not eligible for patent unless such known process results into a new product or at least employs one new reactant. For the purpose of this clause salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, their mixers, complexes combinations and other derivatives of known substance shall be considered as same substance, unless they differ significantly in properties with regard to efficacy.

Further a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance is not eligible for patent. The resulting admixture should result into a combination with surprising or synergistic properties.

Self Assessment Question

(Spend 2 minutes)

3) Define pharmaceutical substance?

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2.9 PATENT

Section 2(1)(m) – “patent” means a patent for any invention granted under this Act.

Patent is a right granted to a person by the government to exclude others from making, using or selling one’s invention and includes the right to license others to make, use or sell it. According to the *Webster New Collegiate Dictionary*, patent is an official document conferring a right or privilege; a writing securing to an inventor for a term of years the exclusive right to make, use, or sell his invention; the monopoly or right so granted. Patent is granted by the government for an ‘invention’ as defined in Section 2(1)(j). Patent will be granted according to the procedure provided in the patents Act. Section 43 of the Act provides that after a patent application is found fit for the grant of patent in accordance with the provisions of the Act, patent shall be granted with the seal of the patent office and the date on which the patent is granted, and shall be entered in the register of patents. After the patent is so granted, it is published and thereupon the application, specification and all other documents related thereto become open for public inspection.

The effect of the grant of a patent is *quid pro quo*, wherein *quid* is the knowledge disclosed to the public and *quo* is the monopoly granted for the term of the patent. Patent granted as per the procedure of the Patents Act, confers the following rights upon the patentee:

- where the subject matter of the patent is a product, patentee has the exclusive right to prevent third parties without his consent to make, use, offer for sale, sell or import that product in India. In other he may or authorize third parties to do these acts;
- where the subject matter of the patent is a process, patentee has the exclusive right to prevent third parties without his consent to use that process, offer for sale, sell or import the product obtained by the use of that process in India. (Sec. 48). In other words any person authorized by him can do these acts.

2.10 PATENTEE

Section 2(1)(p) – “patentee” means the person for the time being entered on the register as the grantee or proprietor of the patent.

“Patentee” is the one to whom a patent has been granted. The term is usually applied to one who has obtained letters patent for a new invention. It included an assignee of a patent whose name entered into the register of patents, kept in the patent office.

2.11 PATENT OF ADDITION

Section 2(1)(q) – ‘patent of addition’ means a patent granted in accordance with section 54.

Sections 54 to 56 deal with the patents of addition. Section 54 provides that (i) where a person has moved an application for any modification of or improvement in the invention (“main invention”) already disclosed in the complete specification, filed earlier for the grant of a patent, or the person is the patentee in respect to that invention, the Controller of Patents, on the request of the applicant, may grant patent for modification or improvement as a ‘patent of addition’; (ii) when an invention which is an improvement or modification of another invention is the subject of an independent patent and the patentee is also the patentee for the main invention, then on the request of the patentee, the Controller may revoke the patent for modification or improvement and grant to the patentee the patent of addition in its place, bearing the same date as the date of the patent so revoked.

As a matter of rule, the patent of addition cannot bear the date prior to the main invention. It should be either bears the same or the later date than the filing of the application of the main invention. Nor can the patent of addition be granted before the grant of the patent for the main invention.

Term of the patent of addition is equal to the patent for the main invention and co-terminus with the patent for the main invention. However, if the main invention has been revoked, the court or the Controller, as the case may be, on the request by the patentee, may order the patent of addition to become an independent patent for the remainder of the term of the main invention and it will remain operative during that time. Normally no renewal fee is payable in respect of patent of addition, except where it has become an independent patent for which renewal fee is payable thereafter. The validity of a patent of addition cannot be questioned on the ground that it ought to have been the subject of an independent patent. In determining its novelty, the regard will be given to the complete specification in which the main invention has been described.

2.12 PERSON AND PERSON INTERESTED

Section 2(1)(s) – “person” includes the government.

In general use, ‘person’ is synonymous with human being, i.e. a natural person, but by a statute, term may include associations, corporations, partnerships, trustees, etc. According to the *General Clauses Act 1897* [Sec. 3(42)], ‘person’ shall include any company or association or body of individuals, whether incorporated or not. The definition in the Patents Act includes in its definition the government.

Section 2(1)(t) – “person interested” includes a person engaged in ,or in promoting, research in the same field as to which the invention relates

The term is specifically applicable to keep the post grant opposition /revocation/ grant of compulsory license limited to persons with interest in the same field. The upfront requirement for filing post grant opposition (Sec. 25(2)) /revocation (Sec. 64(1) / grant of compulsory license (Sec. 84(1)) in patent is to establish the locus standi in each case. The person interested has been interpreted to have wider meaning in view of inclusive definition. However the pre-grant opposition can be filled by any person. (Sec. 25(1)).

2.13 APPELLATE BOARD

Section 2(1)(a) – “Appellate Board” means the Appellate Board referred in Section 116.

Section 116 of the Patents Act provides that the Appellate Board established under Section 83 of the Trademarks Act, 1999 shall be the Appellate Board for the purposes of the Act and the said Appellate Board shall exercise the jurisdiction, power and authority conferred on it by or under the Act. Section 83 of the Trademarks Act, 1999 provides that the Central government shall, by notification in the official Gazette, establish an Appellate Board to be known as the Intellectual property Appellate Board (IPAB) to exercise the jurisdiction, powers and authority conferred on it by or under this Act. The Board has since been established which has become functional from 15 September 2003 for trade marks and 4th April 2007 for patents. Section 84 of the Trademarks Act, 1999 contains provisions on the composition of the IPAB. It provides that Board shall consist of a chairman, vice-chairman and such number of other members as the Central Government may deem fit. A bench shall consist of one judicial member and one technical member and shall sit at such place as the central government may specify.

Section 116 of the Patents Act provides that there shall be a Technical Member on the Board for the purposes of the Act and the qualification of the Technical Member have been specified as under:

- a. he has held the post of Controller under the Act or has exercised the functions of the Controller for at least five years; or
- b. he has functioned as a Registered Patent Agent for at least ten years and possesses a degree in engineering or technology or a masters degree in science or equivalent.

The Appellate Board shall hear the appeals against the orders/decisions of the Controller. The Board enjoys the powers of a civil court and the proceedings

before the IPAB are in the nature of judicial proceedings. No court or other authority shall have or be entitled to exercise any jurisdiction, powers or authority in relation to matters relating to appeal (Sec 117A) / revocation (Sec. 117D) / rectification or register (Sec 117D). However, the Board does not hear the cases of infringement of patents, where the courts have the jurisdiction as provided under the Act. The Controller will give effect to the order or judgment of the IPAB.

2.14 ASSIGNEE

Section 2(1)(ab) – “assignee” includes an assignee of the assignee and the legal representative of a deceased assignee and references to the assignee of any person include references to the assignee of the legal representative or assignee of that person.

Assignment is the act of transferring to another all or part of one's property, interest or rights. It is a transfer or making over to another of the whole of any property, real or personal, in possession or in action, or any estate or right therein. It includes transfer of all kinds of property. In other words, it is the transfer by a party of all the rights to some kind of property, usually intangible property such as rights in lease, mortgage or intellectual property.

An assignee is a person to whom an assignment is made, in fact, by the party having the right; an assignee in law is one to whom the law vests the right, as an executor or administrator, who is an assignee of the testator.

Section 68 of the Patents Act provides that an assignment of a patent or of a share of a patent, a mortgage, license or the creation of any other interest in a patent shall be valid only if the same is in writing in the form of a document incorporating all the terms and conditions governing the rights and obligations of both the parties. The details of such an assignment shall be entered into the register of patents, kept in the patent office. Where any person becomes entitled by assignment, transmission or operation of law to a patent or to a share in a patent, or becomes entitled as a mortgagee, licensee, or otherwise in a patent, he has to apply in writing to the Controller for the registration of his title or interest in the register of patents.

2.15 LEGAL REPRESENTATIVE

Section 2(1)(k) – “legal representative” means a person who in law represents the estate of a deceased person.

The term ‘legal representative’ in its broadest sense means one who stands in place of, and represents the interests of another. He is a person who oversees the legal affairs of another. Section 2(11) of the Civil Procedure Code, 1908 defines ‘legal representative’ as a person who in law represents the estate of a deceased person, and includes any person who intermeddle with the estate of the deceased and where a party sues or is sued in a representative character, the person on whom the estate devolves on the death of the party so suing or sued. The definition given in the Patents Act is similar to this.

The term conceives two distinct categories: First, the heirs or persons, who in law represents the estate of the deceased person. Second, at par with them and in a class by itself is any person who intermeddles with the estate of the deceased. Such a person is equally a legal representative.

2.16 BUDAPEST TREATY

Section 2(1)(aba) – “Budapest Treaty” means the Budapest Treaty on the International Recognition of the Deposit of Micro-organisms for the Purposes of Patent Procedure done at Budapest on 28th day of April, 1977, as amended and modified from time to time.

The **Budapest Treaty** on the International Recognition of the Deposit of Micro-organisms for the Purposes of Patent Procedure is an international treaty signed in Budapest, Hungary, on April 28, 1977. It entered into force on August 9, 1980, and was later amended on September 26, 1980. The treaty allows deposits of microorganisms at an international depository authority to be recognized for the purposes of patent procedure. Usually, in order to meet the legal requirement of sufficiency of disclosure, patent applications and patents must disclose in their description the subject-matter of the invention in a manner sufficiently clear and complete to be carried out by the person skilled in the art. When an invention involves a microorganism, completely describing the said invention in the description to enable third parties to carry it out is usually impossible. This is why, in the particular case of inventions involving microorganisms, a deposit of biological material must be made in a recognised institution. The Budapest Treaty ensures that an applicant, i.e. a person who applies for a patent, needs not to deposit the biological material in all countries where he/she wants to obtain a patent. The applicant needs only to deposit the biological material at one recognised institution, and this deposit will be recognised in all countries party to the Budapest Treaty.

Section 10 (4)(d) of the Patents Act provides that if the application is related to biological material, mentioned in the specification, which may not be described fully, or the use and the method by which it is to be performed, and if the material is not available to the public, the application shall be completed by depositing the material with an international depository authority under the Budapest Treaty, within one year from the date of filing the patent application in India and reference should be given in the specification within the prescribed period. The specification should also disclose the source and geographical origin of the biological material.

2.17 PATENT CO-OPERATION TREATY

Section 2(1)(oa) – “Patent Co-operation Treaty” means the Patent Co-operation Treaty done at Washington on the 19th day of June, 1970 as amended and modified from time to time.

The Patent Cooperation Treaty (PCT) was concluded in 1970, amended in 1979, and modified in 1984 and 2001. The PCT is open to States party to the Paris Convention for the Protection of Industrial Property (1883). It provides a unified procedure for filing patent applications to protect inventions in each of its Contracting States and the applicant can designate the countries for its patent protection. A patent application filed under the PCT is called an international application or PCT application.

The Treaty makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries designated by the applicant,

by filing an “international” patent application. Such an application may be filed by anyone who is a national or resident of a Contracting State. It may generally be filed with the national patent office [the Receiving Office] of the Contracting State of which the applicant is a national or resident or, at the applicant’s option, with the International Bureau of the World Intellectual Property Organization (WIPO) in Geneva. After the application is made with a Receiving Office (RO) [member states of the PCT], its copy is then transmitted to the International Bureau of the WIPO and to the competent International Searching Authority. It then results in a search performed by an International Searching Authority (ISA), accompanied with a written opinion regarding the patentability of the invention which is the subject of the application. It is optionally followed by a preliminary examination, performed by an International Preliminary Examining Authority (IPEA). Finally, the examination and grant procedures are handled by the relevant national or regional authorities. The PCT does not lead to the grant of an “international patent”, which does not exist.

The States parties to the PCT, i.e. the Contracting States constitute the International Patent Cooperation Union. India is a party to the Treaty.

Chapter III of the Patents Rules, 2006 deal with the PCT applications [international applications].

2.18 INTERNATIONAL APPLICATION

Section 2(1)(ia) – “international application” means an application for patent made in accordance with the Patent Cooperation Treaty.

Chapter III of the Patents Rules provides the procedure for filing the international application under the PCT. The patent office of India is the **Receiving Office (RO)** of an international application, which will transmit the copy of the same to the International Bureau of the WIPO and the Competent International Searching Authority. The application will be filed with the patent office in triplicate in English or Hindi, alongwith the requisite fee. The international application designating India as a country for acquiring patent shall not be processed before the expiry of thirty-one months (in many PCT countries, it is thirty months period) from the priority date [submission date of the application as indicated on the application]. However, on the request made by the applicant, the patent office may process the application at any time before the expiration of thirty-one months. Before the international application designating India is processed by the patent office, prescribed national fee is required to be submitted. If the application is not filed in English, a duly verified translation in English of the application should be filed within the prescribed time limit of thirty-one months.

2.19 CONVENTION COUNTRY

Section 2(1)(d) – “convention country” means a country which is a member of a group of countries or a union of countries or an Inter-governmental organisation [referred to as a convention country in Section 133].

Sections 133 and 135 deal with convention countries and convention application respectively. A Convention country is the one which is a member of an international, regional or bilateral treaty, convention or arrangement to which India is also a

member and which accords similar treatment to the applicants from India or to citizens of India as it provides to its own citizens or citizens from other member countries in respect of grant of patents and protection of patent rights. The most important international conventions in this respect are the International Convention for the Protection of Industrial Property [Paris Convention] and the Trade Related Intellectual Property Rights [TRIPS] Agreement. The Paris Convention constitute a Union of its members, which accord the national treatment to the nationals of the member states parties to the convention.

Under Section 135 of the Act, where a person has made an application for a patent in respect of an invention in a convention country and that person or the legal representative or assignee of that person makes an application under the Act for a patent within twelve months after the date on which the basic application was made, the priority date of a claim of the complete specification, based on matter disclosed in the basic application, will be the date of the basic application. Convention application gets a twelve month priority period from the date of filing the basic application for patent in a convention country and the complete specification is based on matter disclosed in the basic application. For example, if an application has been first filed for the protection of an invention in the convention country X, then the subsequent application, based on that invention, can be filed in country Y within twelve months from the date when it was first filed in X and no one else can claim priority over that invention. There is an obvious difference between an international application and a convention application. Whereas international application filed in accordance with PCT has the thirty-one months priority period, the convention application is restricted to twelve months as provided in the Paris Convention from the date of filing of the basic application for the patent. A convention application must be accompanied by a complete specification, and specifying the date and country in which the application for protection was first made.

2.20 SUMMARY

- The condition necessary for granting a patent for any invention are:
 - a) the invention should be new
 - b) it should involve an inventive step
 - c) it should be capable of an industrial application.
- An inventive step is an important factor for any patentable invention.
- An invention to be patentable must be one which could be applied for practical purposes and not merely theoretical.

2.21 TERMINAL QUESTIONS

- 1) Write a note on prior art search.
- 2) What does the phrase 'capable of industrial application' means?
- 3) Explain the patent co-operation treaty?

2.22 ANSWERS AND HINTS

Self Assessment Questions

- 1) Prior claiming may arise in the following three situations
 - 1) Where the earlier claim lies wholly within the area of the later claims.
 - 2) Where the areas of the earlier and later claims overlap and
 - 3) Where the earlier claims is broader than and includes the area covered by the later claims.
- 2) An inventive step can be determined after knowing whether or not the invention involves
 - A technical advance over the existing knowledge i.e. prior art; or
 - Have economic significance; or
 - Both; and
 - Invention is non obvious to a person skilled in the art.
- 3) A pharmaceutical substance is one which is used for therapeutic use and where application involves.
 - a) a chemical interaction, or physico-chemical interaction, with a human physochological system, or
 - b) action on an infectin agent, or on a toxin or other person, in a human body;
 - c) but does not include a substance that is solely for use in vitro dignosis or in vitro testing.

Terminal Questions

- 1) Refer to Section 2.3, 2.4
- 2) Refer to Section 2.5
- 3) Refer to Section 2.17

UNIT 3 RIGHTS IN PATENTS

Structure

- 3.1 Introduction
- 3.2 Objectives
- 3.3 Scope of Patent Protection
- 3.4 Position of Patent Law in India
 - 3.4.1 Nature and Extent of Patent Rights
 - 3.4.2 Rights of the Co-owners
 - 3.4.3 Persons Entitled to Exercise the Patent Rights
- 3.5 Term of the Patent
- 3.6 Limitation on Patent Rights
- 3.7 Acts Not Considered as Infringement
- 3.8 Compulsory License
 - 3.8.1 TRIPS and Compulsory License
 - 3.8.2 Doha Declaration and Compulsory License
- 3.9 Canadian Case
- 3.10 Provisions Under the Paris Convention
- 3.11 Joint Effects of TRIPS and Paris Convention
- 3.12 Abuse or Misuse of Patent Rights
 - 3.12.1 Measures Adopted to Prevent Misuse of Patent Monopoly
- 3.13 Position in India
- 3.14 Compulsory License on Notification by Central Government
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 - 3.14.4 When the Case is Made
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- 3.15 Revocation of Patent
- 3.16 Types of Revocation
 - 3.16.1 Revocation of Patent by Controller
 - 3.16.2 Revocation of Patent by IPAB
 - 3.16.3 Revocation of Patent on Direction/Order of Central Government
 - 3.16.4 Grounds for Revocation of Patents
- 3.17 Provisions Relating to Secret Use
- 3.18 Summary
- 3.19 Terminal Questions
- 3.20 Answers and Hints

3.1 INTRODUCTION

An inventor constantly lives under the fear of copying of his innovation by others. He devises various ways to protect his innovation. One of the traditional way to protect his innovation is to keep it as guarded secret and commercially exploit it by himself. This guarded information is transferred from one generation to other traditionally. Living example of this mode of transfer is the secret formula of Coca Cola and traditional methods of healing available in India. But these innovators do not get any protection against commercial copying of their innovation by third party. This indicates that any person, who gains the knowledge to use the secret invention, is free from any legal action by the inventor to manufacture/use the invention as no property right subsists therein. However, possibility of cumbersome and tedious legal action in such cases on the basis of breach of trust, contract, confidence or fraud under civil law cannot be ruled out. The better option with the inventor to protect his ingenuity is to seek a patent protection for his innovation under the patent law. The property right under the patent confers on the patentee, the right to exclude others from manufacturing or using the invention in a way described in the patent application during the term of patent. Grant of a patent is prerequisite for enjoying monopoly to exploit any invention without competition. To check the abuse of patent monopoly and safeguard public interest certain conditions are imposed on patentee's exclusive right to use or deal with the patent. These conditions vary from country to country.

3.2 OBJECTIVES

After reading this unit, you should be able to:

- explain the scope of patent protection and its position in India;
- describe what acts are not considered as infringement;
- discuss compulsory license;
- make a comparison between TRIPS and Compulsory license, Doha declaration and compulsory license;
- mention the various provisions under the Paris Convention;
- discuss the abuse of patent rights and the measures adopted for its remedy;
- explain revocation of patents and the different types of revocation; and
- mention the provisions relating to secret use.

3.3 SCOPE OF PATENT PROTECTION

Scope of the patent right is defined by the claims of the invention. The disclosure of an invention is the primary requirement for the grant of a patent under the patent law of all the countries. The patentee is entitled to an exclusive right to make or use the patented product or use the patented process during the term of the patent. Third party is not entitled without the permission of the patentee, to make, use, sell, and offer to sell or import the patented product in the country where patent is granted. Similarly, the patentee enjoys the right to prevent others from the act of using, offering for sale, selling or importing the product obtained directly by that process in the country where patent is granted. A patent carries

for the time being entered on the register as the grantee or proprietor of the patent'. Thus the person who is registered as grantee or proprietor is only entitled under Section 70 to assign his rights or grant licenses or otherwise deal with patent and to give effectual receipts for any consideration for any such assignment, license or dealing. In this context, it is essential that any transfer of right in the patent must be in writing and it must be entered in the patent register to be effective for any action under the patent Law. This is specific requirement of Section 68 which states that an assignment of a patent or of a share in a patent, a mortgage, license or the creation of any other interest in a patent shall not be valid unless the same were in writing and the agreement between the parties concerned is reduced to the form of a document embodying all the terms and conditions governing their rights and obligations and duly executed. Similarly, where a person become entitled to a patent by assignment, transmission or operation of law or he become entitled to a share in patent through mortgage license or otherwise, he is also required under Section 69 to apply in writing for registration of his title or interest as the case may be.

3.5 TERM OF THE PATENT

The patentee is entitled to exercise his right only during the term of the patent. The term of patent as specified in Section 53 of the Patents Act is 20 years from the date of filing of the application for patent in all cases except in respect of applications made under Sub-section (2) of Section 5 before the 1st January, 2005, where this right would accrue from the date of grant of the patent. This indicates that the patentee is entitled to take any action for infringement only after the grant of the patent.

3.6 LIMITATION ON PATENT RIGHTS

Patent law imposes certain conditions on the enjoyment of exclusive right to use or deal with the patent by the patentee. The rights of the patentee are not deemed to be infringed by use of the invention in a foreign vessels or aircraft or vehicle owned by a foreigner which comes to in India (including the territorial waters thereof) temporarily or accident only. This exemption specially provided under Section 49 to meet the obligation under international law. Further, Section 107 A provides to exempt certain acts from infringement. These acts are (a) any act of making, constructing, using, selling or importing a patented invention solely for uses reasonably related to the development and submission of information required under any law for the time being in force, in India, or in a country other than India that regulates the manufacture, construction, use, sale or import of any product; (b) importation of patented products by any person from a person who is duly authorized under the law to produce and sell or distribute the product. The extent of the protection is limited to the claims and disclosure made in the application for patent.

In addition to above limitation the grant of a patent is subject to certain conditions as specified in Section 47. This provision provides that the grant of a patent under this Act shall be subject to the condition that-

- 1) any machine, apparatus or other article in respect of which the patent is granted or any article made by using a process in respect of which the patent is granted, maybe imported or made by or on behalf of the Government for the purpose merely of its own use;

- 2) any process in respect of which the patent is granted maybe used by or on behalf of the Government for the purpose merely of its own use;
- 3) any machine, apparatus or other article in respect of which the patent is granted or any article made by the use of the process in respect of which the patent is granted, maybe made or used, and any process in respect of which the patent is granted may be used, by any person, for the purpose merely of experiment or research including the imparting of instructions to pupils; and
- 4) in the case of a patent in respect of any medicine or drug, the medicine or drug maybe imported by the Government for the purpose merely of its own use or for distribution in any dispensary, hospital or other medical institution maintained by or on behalf of the government or any other dispensary, hospital or other medical institution which the Central Government may, having regard to the public service that such dispensary, hospital or medical institution renders, specify in this behalf by notification in the official Gazette.

Patent to bind Government

Section 156 specifically states that a patent shall have to all intents the like effect as against Government as it has against any person. This indicates that Government is bound by the statute to respect the rights of the owner of the patent. However, act also specifies the special circumstances and terms under which the Government may use the patented invention or even acquire it or prohibit a person from using invention. These limitations are provided under Section 47 (use of the patent by the Government), section 100 (use of the invention for the purposes of the Government) and (acquisition of patent by a Central Government). This indicates that certain limitations are imposed on patentee's exclusive right to use or deal with the patent to safe guard the public interest. However government has powers under Section 157 to sell or use forfeited goods.

3.7 ACTS NOT CONSIDERED AS INFRINGEMENT

Addition provisions where use of patented invention by third party, is not treated as an infringement. Two such provisions exit under Section 107A of the Act. First is known as 'Bolar Provision' and the second is called as 'parallel import'. Former provision allow working of the patented invention for obtaining marketing approvals from authorities and later one allowis import of patented product from a person duly authorised under the law to produce and sell or distribute the product. According to Section 107 A(a) , any act of making, constructing, using, selling or importing a patented invention solely for uses reasonably related to the development and submission of information required under any law for the time being in force, in India, or in a country other than India, that regulates the manufacture, construction, use, sale or import of any product shall not be considered as a infringement of patent rights. This provision allows making advance preparation for launching of generic products in the market immediately after the expiry of the term of patent. According to Section 107 A (b) importation of patented products by any person from a person who is duly authorised under the law to produce and sell or distribute the product, shall not be considered as a infringement of patent rights. This provision allows import of cheaper patented products from authorised persons.

Self Assessment Question**(Spend 3 minutes)**

- 2) What two provisions are not considered as acts of infringement?

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3.8 COMPULSORY LICENSE

Notion of Working

When a patent is granted, it is granted with an objective to encourage inventions and to secure that the inventions are worked on a commercial scale and to the fullest extent that is reasonably practicable without undue delay. Working of a patent is primary condition for grant of exclusive right. At times this exclusive right may result in the abuse particularly when the invention is insufficient or by exploited for work not used in at all by the patentee. This is known to done purposely to enjoy the monopoly and even sell the patented products at high price. In order to prevent and check such abuses which may result in the exercise of the patent rights, Government invokes provisions for granting compulsory license to a third party to make best use of the patented invention. This in fact is done not to restrict the rights of the patentee. The basic premises for making such compulsory license provisions, aims at stopping the abuse/misuse and preventing the negative effect of such action on the public. Thus working of a patented invention is essential otherwise the power to grant compulsory licenses would be invoked to safeguard the interests of public. The main argument for enforcing working of the invention in a country is the consideration that, inventions must be used to promote the industrialization of the country and the grant of a patents for invention should not be used as a tool to merely block the working of the invention in the country or to monopolise importation of the patented article by the patent owner. They should rather be used to introduce the use of the new technology into the country. Whether the patent owner can really be expected to do so, is question of the economics consideration he receives. Working of a patent in all countries is generally not economical. Moreover, it is ordinarily recognised that immediate working in all countries is impossible. Through Compulsory license provisions patent law strives to strike a balance between these conflicting interests.

3.8.1 TRIPS and Compulsory License

The Article 2 of the TRIPS Agreement *inter alia* provided that members must comply with the requirements of Article 1 to 12 and 19 of the Paris Convention. Article 31 of the TRIPS contains provisions on the possibility of government authorities granting licenses to use the patented invention without authorization of the right holder. Such licenses are called 'compulsory licenses' under Paris Convention. Article 8 of the TRIPS Agreement furthers affirms that Members may adopt measures to protect public health, among other overarching public policy objectives such as nutrition and socio-economic and technological development.

3.8.2 Doha Declaration and Compulsory Licenses

In the Doha Ministerial Conference in November 2001, recognising the flexibilities in the TRIPS Agreement to safeguard public health concerns, a declaration 'The Doha Declaration on the TRIPS Agreement and Public Health' was adopted. The signatories to this Declaration recognised that each member has the right to

- grant compulsory licenses and the freedom to determine the grounds upon which such licenses are granted.
- determine what constitutes a national emergency or other circumstances of extreme urgency. It was affirmed that public health crises, including those relating to HIV/AIDS, tuberculosis, malaria and other epidemics, can constitute a state of national emergency or circumstances of extreme urgency.
- establish its own regime for such exhaustion without challenge, subject to the MFN and national treatment provisions of Article 3 and 4.

3.9 CANADIAN CASE

Canada is the first country to grant compulsory license for export to a developing country or least developed country using the provisions of para 6 of the Doha Declaration. The patented drug in this case was 'TriAvir' a triple combination AIDS therapy drug. This drug is manufactured in Canada by Apotex, Inc under the name 'ApoTriavir' and can now be exported to Rwanda under the compulsory license for export. Rwanda had informed the WTO on 17 July, 2007 that it intends to import 260,000 packs of 'TriAvir' a fixed-dose combination product of Zidovudine, Lamivudine and Nevirapine during the period of two years as it has no manufacturing capacity in the pharmaceutical sector to manufacture this drug in the country. The WTO received the notification of such authorization from Canadian government on 4 October 2007, for allowing a company to make a generic version of a patented medicine for export to Rawanda under special WTO provisions agreed in 2003.

3.10 PROVISIONS UNDER THE PARIS CONVENTION

As stated earlier Paris Convention recognise the right of member states to grant compulsory license. Article 5A(2) of this Convention specifies that Member States may adopt legislative measures for the granting of compulsory licenses to prevent abuses which may result in the exercise of the patent rights, such as failure to work the patent. Article 5A(3) further provides that provisions of forfeiture / revocation of the patent can be resorted to only where the grant of compulsory licenses have not been sufficient to prevent such abuses. However, requested for forfeiture or revocation of the patent cannot be made before two years from the grant of the first compulsory license. Article 5A(1) of this Convention provides that importation by the patent holder in the country where the patent has been granted of articles protected by the patent manufactured in any Member State does not entail forfeiture of the patent. Article 5(A) 4 provides for fulfillment of specific requirements before the request for the granting of compulsory licenses on the ground of failure to work or insufficient working can be made. This article further specify the requirement that the request for compulsory license shall not be made for before the expiration of four years from the filing date of the patent

application or three years from the grant of the patent, whichever period expires last. It further adds that the compulsory license shall be refused if the patent holder justifies the non-working or insufficient working of the patent by legitimate reasons. It also specifies that where compulsory license is allowed, it shall be non-exclusive and non-transferable even in the form of sub-license, except, with that part of the enterprise which exploits it.

3.11 JOINT EFFECTS OF TRIPS AND PARIS CONVENTION

India is a Member of the Paris convention and also a signatory to TRIPS agreement. Joint effect of this in respect of the working of patents and compulsory licenses, is that member states are free to take legislative measures providing for the grant of compulsory licenses subjected to the conditions specified in Article 31 of the TRIPS agreement and Article 5 of the Paris Convention. Compulsory licenses on the ground of failure to work or insufficient working are the most common kind of legislative provisions adopted to prevent abuses of the rights conferred by the patent. Compulsory licenses may also be granted on the ground of public interest particularly to safeguard public health.

3.12 ABUSE OR MISUSE OF PATENT RIGHTS

Abuse or misuse of rights granted by patents is known to occur in any countries. But this may take different forms like

- resorting to meet the demand of the patented product solely by importation and with no manufacturing locally which at times is seen as measure to discourage or prejudice establishment of new industry or the development of existing industry in the country where the patent is granted.
- refusal to grant license to work the invention locally on reasonable terms and conditions
- Imposing restrictive conditions on the use, sale or lease of the patented invention, which is seen as coercive practice to delay commercialisation of the patented invention preventing the society from gaining free access to the invention.

3.12.1 Measures Adopted to Prevent Misuse of Patent Monopoly

The legislative provisions relating to grant of compulsory license are present in almost all the countries in one form or the other. In India these provisions are contained in the Patents Act, 1970. The variation that exists in the national laws basically pertains to the ground on which such licenses are granted. In India flexibilities available under TRIPS are used to maximise the benefit of the patent law to the public particularly to meet the requirements of public interest like public health, national emergency and extreme urgency etc. In fact such provisions are very essential for the developing and least developed countries to ensure affordable access to medicine to meet public health requirements.

3.13 POSITION IN INDIA

The provision relating to grant of compulsory licenses are contained in Chapter XVI of the Patent Act, 1970. General principles under which patents are granted

inter-alia states that patents are granted to encourage inventions and to secure that the inventions are worked in India on a commercial scale and to the fullest extent that is reasonably practicable without undue delay and that they are not granted merely to enable patentees to enjoy a monopoly for the importation of the patented article. The patentee is thus required to work his invention to the fullest possible extent. Apart from this, it is also required that reasonable a requirement of the public is satisfied and the patented invention is available to public at reasonably affordable price. In case the patented invention is not made available to public at reasonably affordable price or the reasonable requirement of the public is not satisfied or the patented invention is not worked in the territory of India, the conditions of Section 84 applies. Any interested persons then become eligible to make an application for grant of compulsory license. This section is applicable only after the expiration of three years from the date of grant of patent. The interested person can apply for compulsory license on any of the grounds specified in Section 84. In following circumstances, the reasonable requirement of the public would be deemed not to have been satisfied, if, by reason of the refusal of the patentee to grant a license on reasonable terms-

- i) an existing trade or industry or the development thereof or the establishment of any new trade or industry in India is prejudiced; or
- ii) the demand for the patented article has not been met to an adequate extent or on reasonable terms; or
- iii) a market for export of the patented article manufactured in India is not being supplied or developed; or
- iv) the establishment or development of commercial activities in India is prejudiced; or
 - if, by reason of conditions imposed by the patentee upon the grant of license under the patent or upon the purchase, hire or use of the patented article or process, the manufacture, use or sale of materials not protected by the patent, or the establishment or development of any trade or industry in India, is prejudiced; or
 - if the patentee imposes a condition upon the grant of license under the patent to provide exclusive grant back, prevention to challenges to the validity of patent or coercive package licensing; or
 - if the patented invention is not being worked in the territory of India on a commercial scale to an adequate extent or is not being so worked to the fullest extent that is reasonably practicable; or
 - if the working of the patented invention in the territory of India on a commercial scale is being prevented or hindered by the importation from abroad of the patented article by
 - i) the patentee or persons claiming under him; or
 - ii) persons directly or indirectly purchasing from him; or
 - iii) other persons against whom the patentee is not taking or has not taken proceedings for infringement.

Prerequisites for granting compulsory license

In the considering the application for a compulsory license the Controller is required to take into account the following aspects-

- i) nature of the invention, the time which has elapsed since the grant of the patent and the measures already taken by the patentee or any licensee to work the invention to the fullest extent reasonably practicable;
- ii) the ability of the applicant to work the invention to the public advantage;
- iii) the capacity of the applicant to undertake the risk in providing capital and working the invention, if the application were granted; and
- iv) whether the applicant has made efforts to obtain a license from the patentee on reasonable terms and conditions and such efforts have not been successful within a reasonable period ordinarily not exceeding six months.

| | |
|---|--------------------------|
| Self Assessment Question | (Spend 4 minutes) |
| 3) Mention the misuse of patent rights and the measures adopted to remove it? | |
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3.14 COMPULSORY LICENSE ON NOTIFICATION BY CENTRAL GOVERNMENT

Apart from the provisions for compulsory license under Section 84 the Central Government is also empowered under Section 92 to issue a notification in the Official Gazette to the effect that the compulsory license can be granted at any time after the grant of patent in the view of the prevailing circumstances of National Emergency or Extreme emergency or in case of public non-commercial use. This special provision is provided to address any public health crises, relating to Acquired Immuno Deficiency Syndrome, Human immuno deficiency virus, tuberculosis, malaria or other epidemics. In such circumstances the general procedure and the provisions of oppositions to the grant of compulsory license are waived to avoid delay in working of the patented invention for meeting the public health related requirements.

3.14.1 Licensing of Related Patents-Section 91 Application

Any person who has the right to work any other patented invention either as patentee or licensee may apply to the Controller any time after the grant of the patent for obtaining a compulsory license of the first mentioned patent on the ground that he is prevented or hindered without such license from working the

other invention efficiently or to the best advantage possible. For obtaining compulsory license of related patents, the applicants must satisfy the following conditions:

- a) that the applicant is able and willing to grant, or procure the grant from the patentee and his licensees if they so desire, a license in respect of the other invention on reasonable terms; and
- b) that the other invention has made a substantial contribution to the establishment or development of commercial or industrial activities in the territory of India

3.14.2 Special Compulsory Licenses – on Notification by Central Government

A compulsory license can be made available on any patented invention any time after the grant of a patent on notification by Central Government. Such a notification by the Central Government is issued in circumstances of national emergency; or circumstances of extreme urgency; or cases of public non-commercial use. This notification is made in the Official Gazette, through a declaration to the effect that it is necessary to grant compulsory license in respect of notified patent. After the notification any person can apply to the Controller for grant of compulsory license. In settling the terms and conditions of the license the Controller is required to ensure that patented invention is available to public at lowest price with patentee receiving reasonable benefit.

Section 92(3) specify special situations like national emergency, circumstances of extreme urgency or public non-commercial use which may arise due to public health crises relating to Acquired Immune Deficiency Syndrome (AIDS), Human Immune deficiency Virus (HIV), tuberculosis, malaria and other epidemics when the normal opposition procedure to the grant of compulsory license laid down in Section 87 is not available to the patentee. This provision provides for a fast track procedure for grant of compulsory license.

3.14.3 Compulsory License for Export of Patented Pharmaceutical Product in Exceptional Circumstances

The compulsory license under the normal circumstances is available predominantly for the purpose of supply in the Indian market. Exception to this provision was made in section 92A to address the public health concerns of the countries having insufficient or no manufacturing capacity in the pharmaceutical sector to implement the decision of the TRIPS council on Para 6 of the Doha Declaration on TRIPS Agreement and Public Health. Section 92A(1) specify the conditions that must be fulfilled to a grant of a compulsory licenses for export purposes. Such license is available only for

- a) The patented pharmaceutical product.
- b) Manufacture and export.
- c) Export to any country having insufficient or no manufacturing capacity in the pharmaceutical sector.
- d) The product addressing the public health problems.

e) The “pharmaceutical products” as defined below -

“Pharmaceutical products” means any patented product, or product manufactured through a patented process, of the pharmaceutical sector needed to address public health problems and shall be inclusive of ingredients necessary for their manufacture and diagnostic kits required for their use.

f) the product on which the applicant has either obtain the compulsory license from importing country or the importing country has by notification or otherwise, has allowed Importation of patented pharmaceutical products from India.

The application for compulsory license for export shall be filed in the office where patent has been granted. This application shall be made on Form 17. The applicant shall give the ground relied on by him for making the application. He shall also specify the nature of his interest and the terms and conditions of the license he is willing to accept. This condition is not applicable, where the application is made by the Central Government. The applicant is further required to furnish the certified copies of the documents giving details of documentary evidence in support of his interest and the ground on which the application is made. Fee for filing this application Rs. 1500/- for natural person and Rs. 6000/- for other than natural person either alone or jointly with natural person.

On receipt of the application the Controller is required to ascertain whether *a case is made out or not for grant of compulsory license.*

3.14.4 When the Case is Made Out

Where on consideration of the evidence the Controller is satisfied that the case has been made out he can proceed to pass an order for grant of compulsory license with following terms and conditions

- i) Specify the product for which the license has been granted.
- ii) Specify the quantity of product to be exported based on the need of the importing country.
- iii) Specify the distinguishing feature of the product and/or packages -

The distinguishing feature of the product may be colour/shape of the product or packages. While insisting on this requirement the Controller shall take into consideration there is no significant impact on price of the product.

- iv) Specify the list of importing country and the quantity to be supplied to each country.
- v) Specify the remuneration to be paid to the patentee -

The Controller shall determine the remuneration taking into account the economic value to the country of the use that has been authorised by the Controller

- vi) The Controller can direct the licensee to post the information relating to the quantity of the product supplied under license to each destination with its distinguishing features on the website before the commencement of the shipment.

- vii) The Controller is required to publish following information in the Official Journal -
- i) Patent number
 - ii) Name and address of the licensee
 - iii) Quantity allowed for manufacture and export
 - iv) List of the countries and the quantity to be supplied to each country.
 - v) Duration of the license.

The terms and conditions referred above are not expressly stated in the Act or the Rules. However the provisions of the Doha declaration could be a useful guide for deciding the terms and conditions agreed therein by the signatory member states.

3.14.5 When the Prima Facie Case is Not Made Out

Where on consideration of the evidence the Controller is satisfied that the prima facie case has not been made out he can proceed as per the provision of Rule 97. According to Rule 97(1) the Controller is required to notify the applicant that a prima facie case has not been made out and if the applicant so desire he may request the Controller for hearing. The applicant is required to make request for hearing before the Controller within one month from the date of issue of a notification. If the applicant fails to make such a request within the specified time the Controller can pass an order to refuse such application. Where the applicant made a request to the Controller for hearing, the Controller will proceed as per the provisions of Rule 97(2) and hear the applicant and pass an order for grant of license or refusal of license depending on the merits of the case. The grant of compulsory license under Section 92A (1) and Section 92 A (2) will have no effect on the compulsory license granted under the other provisions of the Patents Act.

The explanation under Section 92A technically defines the scope of the pharmaceutical product that comes under the purview of this provision. The pharmaceutical product covered under this provision covers is any patented product or product manufacture by a patented process including all such ingredients that are necessary for manufacturing of such products. The diagnostic kits required for the use of the patented product are also covered.

3.15 REVOCATION OF PATENT

Introduction : The grant of patent by patent office does not in any way deemed to warrant the validity of any patent. The examination and investigations in the patent office and the results obtained therein does not ensure the validity of any patent. In view of this any patent is liable to be revoked any time during the term of the patent on a petition by any person interested or the Central Government. In the infringement proceedings also the defendant can use grounds available under Section 64 for revocation of patent as a ground for defence. The grounds for making petition for revocation are specified in the Section 64(1). The onus of proof for establishing the grounds of revocation of patents rests with the petitioner for revocation or the defendant in infringement proceeding as the case may be.

The petition for revocation can be filed by any person interested or the Central Government'. The term 'interested person' as defined in Section 2 (t) includes a person engaged in, or in promoting, research in the same field as that to which the invention relates.

3.16 TYPES OF REVOCATION

3.16.1 Revocation of Patent by Controller

The petition of revocation of patent can be made in the patent office within one year from the date of grant. This petition is referred to the Opposition Board constituted by the Controller. This board comprises of three members who are Examiners except the examiner who had dealt with this case, with one of the Examiner nominated as chairman. This board is required to submit its joint report to the Controller. After hearing the parties and taking into consideration of the recommendations of the board the Controller can decide the case. The Controller passes an order for revocation only after giving a fair opportunity to the opponent and the patentee.

3.16.2 Revocation of Patent by IPAB

A petition for the revocation of patent can be made to the Intellectual Property Appellate Board any time after the grant of patent. only after the expiration of one year from date of grant.

3.16.3 Revocation of Patent on Direction/Order of Central Government

a) Patents relating to Atomic Energy inventions

Where the Central Government is satisfied that the patented invention relates to Atomic Energy for which no patent can be granted under sub-section 1 of Section 20 of the Atomic Act 1962 (33) of 1962, it can direct the Controller to revoke such a patent. On receiving directions of the Central Government the Controller can seek amendment of the specification or make an order to revoke such patent. The patentee is served with a notice in this context and after giving opportunity of hearing to him the Controller passes either an order for revocation or to allow the patentee to amend the complete specification. Central Government can issue such directions any time after the grant of a patent.

b) Revocation of patent in public interest

Central Government is also empowered to revoke any patent, which in its opinion is mischievous to the State or generally prejudicial to the public. In India, a transgenic cotton patent was initially granted to US biotech firm Agracetus in 1991, but it was revoked in October 1994 by Central Government using this provision.

Revocation of patent in High Court

The revocation of patent is possible on the application by the defendant in the infringement proceeding as a counter-claim available for defence. Every ground for revocation under Section 64 is available to the defendant in any suit for infringement.

Further High Court can also revoke a patent if the patentee does not allow the Government to make use of the patented invention. According to Section 64 (4), a patent may be revoked by the High Court on the petition of the Central Government, if the High Court is satisfied that the patentee has without reasonable cause failed to comply with the request of the Central Government to make, use or exercise the patented invention for the purposes of Government on reasonable terms.

Revocation of patents for non working

In cases, where the compulsory license has been granted and the patent has not been worked for two years, the patent is liable to be revoked. But such an application can be made only after of expiry of two years from the date of grant of compulsory license. The grounds for making petition for such revocation are similar to the requirements of Section 84. Thus, if the Controller is satisfied that reasonably requirement of the public with respect to patented invention has not been met or the patented invention is not worked in the territory of India or the patented invention is not available to the public at a reasonably affordable price, even after the grant of compulsory license and a time period of two years have elapsed, such patent can be revoked through a order under Section 85. No case has been reported on such revocation.

3.16.4 Grounds for Revocation of Patents

According to provisions of Section 64 a patent can be revoked on any of the following grounds -

a) Prior claiming

Where the invention, claimed in any claim of the complete specification, was found to be claimed in a valid claim of another patent granted in India before the priority date of the invention.

b) and (c) wrongful obtaining

Where the patent was granted on the application of a person who was not entitled under the provisions of this Act to apply or the patent was granted on the application of a person who has not rights of the petitioner or any person under or through whom he claims such rights to apply for patent.

d) Subject matter not an invention.

Where the subject matter of any claim is not an invention within the meaning of the Patent Act.

e) Publicly known or publicly use

Where the invention as claimed in any of the claims is not new, having regard to what was publicly known or publicly used in India before the priority date of the claim or to what was published in India or elsewhere in any of the documents referred to in Section 13.

f) Lacks inventive steps

Where the invention as claimed is obvious or does not involve any inventive step having regard to what was publicly known or publicly used in India or what was published in India or elsewhere before the priority date of the claim.

g) Lacks utility

Where the invention, as claimed in any claim is not useful.

h) Lacks sufficiency of disclosure

Where the complete specification does not sufficiently and fairly describe the invention and the method by which it is to be performed. The sufficiency is viewed in the terms of the description of the method or the instructions for the working of the invention as given in the complete specification. Description is not sufficient where a person possessing average skill and knowledge of the art to which the invention relates, is not able to work the invention. Where the applicant does not disclose the best method of performing the invention that was known to him, it amounts to insufficient in description.

i) Claims not clearly defined or fairly based

Where the scope of any claim of the complete specification is not sufficiently and clearly defined or that any claim of the complete specification is not fairly based on the matter disclosed in the specification.

j) Patent obtained on false suggestion

Where the patent was obtained on a false suggestion or representation.

k) Patent on non patentable subject matter

Where the subject of any claim of the complete specification is not patentable under this Act.

l) Secret use of invention

Where the invention so far as claimed in any claim of the complete specification was secretly used in India, otherwise than as mentioned in Sub-section (3), before the priority date of the claim.

m) Failure to disclose information of foreign application

Where the applicant for the patent has failed to disclose to the Controller the information required by Section 8 or has furnished information which in any material particular was false to his knowledge.

n) Contravention of Secrecy Directions

Where the applicant contravened any direction for secrecy passed under Section 35 or made or caused to be made an application for the grant of a patent outside India in contravention of Section 39.

o) Applicant obtained Leave to amend by fraud

Where leave to amend the complete specification under Section 57 or Section 58 was obtained by fraud.

p) Non-disclosure or wrongful disclosure of source of origin

Where the complete specification does not disclose or wrongly mentions the source and geographical origin of biological material used for the invention.

q) Anticipation by indigenous knowledge

Where the invention so far as claimed in any claim of the complete specification was anticipated having regard to the knowledge, oral or otherwise, available within any local or indigenous community in India or elsewhere.

3.17 PROVISIONS RELATING TO SECRET USE

It is important to note that for the purposes of clauses (e) and (f)

(a) no account shall be taken of personal document or secret trial or secret use; (b) where the patent is for a process or for a product as made by a process described or claimed, the importation into India of the product made abroad by that process shall constitute knowledge or use in India of the invention on the date of the importation, except where such importation has been for the purpose of reasonable trial or experiment only.

And further for the purpose of clause (l) no account shall be taken of any use of the invention -

- a) for the purpose of reasonable trial or experiment only; or
- b) by the Government or by any person authorized by the Government or by a Government undertaking, in consequence of the applicant for the patent or any person from whom he derives title having communicated or disclosed the invention directly or indirectly to the Government or person authorized as aforesaid or to the Government undertaking; or
- c) by any other person, in consequence of the applicant for the patent or any person from whom he derives title having communicated or disclosed the invention, and without the consent or acquiescence of the applicant or of any person from whom he derives title.

3.18 SUMMARY

- The scope of a patent rights is defined by the claims of the invention. The disclosure of an invention is the primary requirement for the grant of a patent under the patent law of all the countries.
- The patentee is entitled to exercise his / her rights only during the term of the patent. Working of a patent is the primary condition for grant of the exclusion right. This exclusive right may at times result in abuse, mainly when the invention is not sufficiently exploited in work or not at all used in work by the patentee.
- Grant of patent office does not validate the patent, and the patent may be remake any to during the term of the patent on a petition by any person interested or even by the central government.

3.19 TERMINAL QUESTIONS

- 1) Patent Rights is a negative right explain.
- 2) Explain 'Bollar provision' and parallel 'import'.
- 3) Mention the pre requisites for obtaining compulsory license.
- 4) Validity of a patent is not warranted explain.
- 5) Mention the different ways of revoking a patent.

3.20 ANSWERS AND HINTS

Self Assessment Questions

- 1) The two co-owner of a patent are entitled to an equal undivided share in a patent. Each of them are entitled to exercise rights available under section 48 without the consent of the other co-owner. The co-owner can not however limit each other rights through any agreement.
- 2) There are two as per section 107 A of the patent act which are not considered as acts of infringement. They are known as 'Bolar provision' and 'parallel import'.
- 3) Refer to Section 3.12

Terminal Questions

- 1) Refer to Section 3.3
- 2) Refer to Section 3.7
- 3) Refer to Section 3.8
- 4) Refer to Section 3.15
- 5) Refer to Section 3.16

UNIT 4 ADMINISTRATION OF PATENTS

Structure

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Patent Office
- 4.4 Powers of the Controller General
- 4.5 Register of Patent
- 4.6 Patent Agents
 - 4.6.1 Rights of Patent Agents
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- 4.11 Summary
- 4.12 Terminal Questions
- 4.13 Answers and Hints

4.1 INTRODUCTION

A strong intellectual property (IP) regime is considered to be essential to attract foreign investment by instilling necessary confidence in the prospective investors. This, in turn, leads to more foreign trade. As India attempts to integrate itself with the world economy, it needs to improve its IPR regime, which is not limited to only enacting laws but making its IPR registration, administrative and enforcement system to international standards. After joining the WTO/TRIPS Agreement, India has tried to improve upon these issues after making its IP laws TRIPS compliant. The administrative infrastructure for patents and the modernization activities undertaken therein are discussed hereunder.

4.2 OBJECTIVES

After reading this unit, you should be able to:

- explain the main functions of a patent office, its location, and its contact addresses;
- discuss the powers of the Controller General;
- describe almost the register of patents;
- analyze the rights of patent agents, qualifications for registration as a patent

agent, the register of patent agents the disqualification for registration as a patent agent;

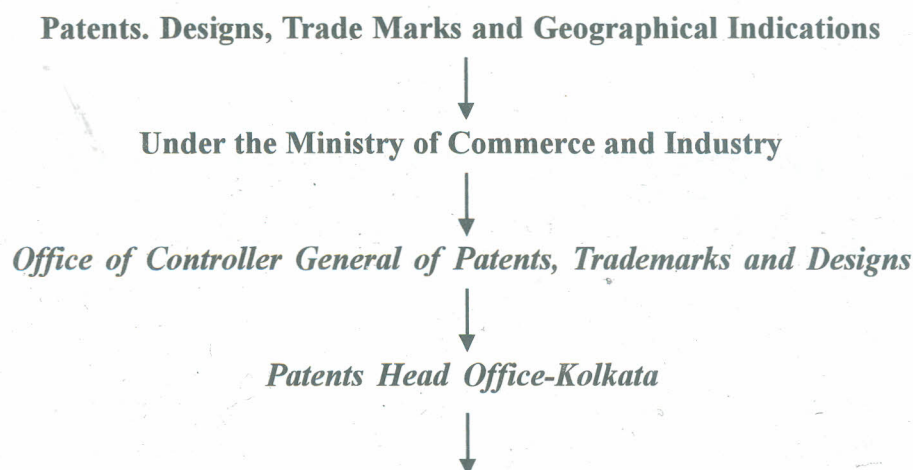
- explain the process for the name of the person firm the register of patents;
- describe the process for the proper training of a patent agent;
- discuss the procedure for the training of patent examiners;
- explain the achievements of modernization of the patent offices; and
- discuss why patent education should be introduced in science colleges.

4.3 PATENT OFFICE

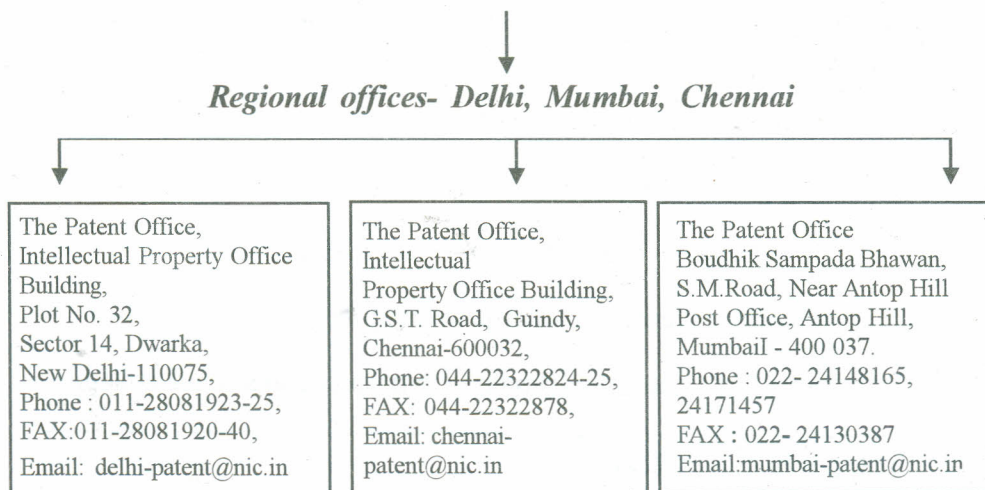
The Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM) is a subordinate office under the Department of Industrial Policy and Promotion (DIPP) in the Ministry of Commerce and Industry (MoC&I). This Office has the statutory responsibility for administration of patents, trade marks, industrial designs and geographical indications and serves as a main source of policy advice to the Government of India on industrial property matters. The Controller General of Patents, Designs and Trademarks (the Controller) is the administrative and statutory head of the Patent Office. The Controller as also the various examiners and other officers are appointed by the Central Government. Although the Act vests most powers in the Controller, it stipulates that such powers can then be delegated by the Controller to his subordinate officers. It is important to appreciate that while certain acts of the patent office qualify as 'purely administrative', others would qualify as 'quasi judicial'.

The Patent Office is headquartered in Kolkata and has branch offices in Mumbai, Chennai, and New Delhi. The Patent Office performs the statutory duties in connection with the grant of patents for new inventions under the Patents Act, 1970 as modified by the Patents (Amendment) Act, 2005.

The details of administrative infrastructure of patents are as under:



The Patent Office, Intellectual Property Office Building,
CP-2 Sector V, Salt Lake City, Kolkata-700091,
Phone : 23671945, 1946, 1987, FAX-033-2367-1988,
Email:- kolkata-patent@nic.in



Controller General of Patents

The Office of the Controller General of Patents functions under the office of Controller-General of the Patents, Trademarks and Designs. The Controller General of Patents, Designs and Trade Marks, appointed under section 3(1) of the Trade marks Act, 1999 is the Controller of Patents under the Patents Act. **The term ‘controller’, according to section 2(1)(b) means the Controller General of Patents, Designs and Trade Marks** referred to in section 73 of the Act. The Central Government may appoint as many patent examiners and other officers as it think fit. These officers work under the superintendence and direction of the controller, who will authorize them to discharge such functions assigned to them from time to time by general or special order in writing.

The controller may, by order in writing or by recording reasons therein, withdraw any matter pending before any officer of the patent office and transfer the same to any other officer or deal with such matter himself either *de novo* or from the stage it was withdrawn from such officer.

Self Assessment Question (Spend 3 minutes)

1) a) The headquarter of the patenting offices is in

b) The three branches of the patent offices are in,,

4.4 POWERS OF THE CONTROLLER GENERAL

Sections 77 to 81 of the Patents Act define the powers of the Controller.

The controller enjoys the powers of a civil court, as provided under the Code of Civil Procedure, 1908 while trying a civil suit, in the following matters:

- a) Summoning and enforcing the attendance of any person and examining him on oath;
- b) Requiring the discovery and production of any document;
- c) Receiving evidence on affidavits;
- d) Issuing commissions for the examination of witnesses of documents;
- e) Awarding costs;

- f) Reviewing his own decision on application made within the prescribed time and in the prescribed manner;
- g) Setting aside an order passed *ex parte* on application made within the prescribed time and in the prescribed manner; and
- h). Any other matter which may be prescribed.

If, in pursuance of these powers, the controller awards costs to any party by its order, it will be executable as the decree of a civil court (Section 77(2)).

In any proceedings before the controller, oral or written evidence may be given. The written evidence are submitted by an affidavit. The controller may, if thinks right, take oral evidence in lieu of or in addition to evidence submitted by affidavit. He may also allow any party to be cross examined on the contents of his affidavit (Section 79).

Apart from the above powers, the controller also has the *power to amend and correct clerical errors in the patent or patent specification*.

Power to amend – The controller may allow any amendment to the patent application or the complete specification or any document relating thereto after receiving an application made in a prescribed manner from an applicant for patent or from a patentee, subject to the conditions as he may think fit. However, the controller will not pass any order relating to amendment as stated above where the matter is before a court in an infringement case or for the revocation of the patent before the High Court, irrespective of the fact that whether the proceedings or suit commenced before or after the filing of the application for amendment (Section 57). The controller may also make amendment in a patent, where the patentee had died or if it is a body corporate and it had ceased to exist, after receiving an application in this regard and substitute the name of the deceased with the name of the applicant.

Power to correct clerical errors - The controller is also authorized to correct any clerical error in any patent/specification or other documents filed in pursuance of such application or in any matter that has been entered in the register of patents. The correction can be made by the controller on his own or upon a request by the interested person made in writing in a prescribed manner. Where he proposes to make any correction without any request, he shall give the notice to the patentee/applicant and any other interested person, who shall be given an opportunity by the controller before making the correction. On the other hand, where the request for correction has been made by the applicant or the patentee, and it appears to the controller that correction will materially change the meaning or scope of the document to which the request relates, he will direct that a notice be published in the prescribed manner in this regard. Upon such publication any interested person can notify to the controller about his opposition to the correction. In such a case, the controller will provide an opportunity to both the parties to be heard, before deciding on the application for correction. The opposition and the hearing will be held in accordance with the rules framed under the Act. The controller, however, is empowered to grant extension of the time for any of the above purposes.

The controller can also grant a hearing to an applicant for a patent, or for amendment of a specification before deciding adversely against him.

4.5 REGISTER OF PATENTS

In each of the patent offices, a register of patents is kept in which the following details are entered:

- a) The names and addresses of grantees of patents;
- b) Notifications of assignments and of transmissions of patents, of licenses under patents, and of amendments, and revocation of patents; and
- c) Particulars of such other matters affecting the validity or proprietorship of patents as may be prescribed.

The register is kept under the control and management of the controller, who can also keep the register or any part of it in computer floppies, diskettes or any other electronic form. This can be maintained and accessed only by a duly authorized person by the controller; any entry or alteration in the said register can be done by such an authorized person.

The controller, upon the sealing (granting) of a patent, shall enter the necessary details of the patent in the register regarding the name, address and nationality of the grantee as the patentee thereof, title and category of the invention, the date of the patent and of sealing together with the address for service of the patent.

An assignment of a patent or a share thereof, a mortgage, license or the creation of any other interest in a patent will be valid only if it is in writing and entered in the register of patents. For the purposes of registration, the person in whose favour an interest has been created through assignment, mortgage, license or otherwise, will have to make an application in the prescribed manner to the controller for the registration of his title, or by notice of his interest. The application for registration can also be made by the assignor, mortgagor, licensor, or other party to the instrument. The controller, after being satisfied with the proof of the title of the person, will enter the necessary details in the register of patents, i.e. to register the person entitled to a patent or a share in a patent or has any interest in the patent as the proprietor or co-proprietor of the patent or the holder of the interest as the case may be with particulars of the instrument through which such a title or interest has been created. Copies of all agreements, licenses and other documents affecting the title to any patent are to be supplied to the controller in the prescribed manner.

The entry of the name of a person in the register is a prima facie evidence of the title of the person in the patent or the interest therein. No document that has not been entered into the register, if shows the name of a person as holding the title to the patent or any interest therein, will be admissible in any court or admitted by the controller as an evidence thereto unless the controller or the court directs otherwise in writing. Once the person's name has been entered into the register as the grantee or proprietor of the patent, he can assign, license, mortgage or create any interest in the patent in favour of any person, in the manner as mentioned above or otherwise deal with the patent.

The facts of payment of the prescribed renewal fee, the date of payment and the issuance the certificate are also entered into the register of patents. Similarly, any change in the name, nationality and address of the patentee will be entered into the register by the controller on the written request made by the patentee in this regard. The controller may seek any proof from the patentee for this matter.

Self Assessment Question

(Spend 3 minutes)

- 2) What details are entered in the register of patent offices? Briefly mention those details.

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4.6 PATENT AGENTS

Sections 125 to 132 of the Patents Act and Rules 108 to 120 of the Patents Rules relate to Patents Agents. The role of the patents agents in the filing of a patent application and ultimately in getting a patent is very significant. The Act has laid down the qualifications of patent agents and the procedure for their registration. To act as a patent agent, a person has to get himself registered in the *register of patent agents* by following these requirements.

4.6.1 Rights of Patent Agents

A registered patent agent has the following rights:

- i) to practice before the controller;
- ii) to prepare all documents, transact all business and discharge other functions in connection with any proceedings before the Controller in relation to a patent under the Patents Act;
- iii) All applications and communications to the controller are to be signed by the patent agent so authorized by the person concerned.

4.6.2 Qualification for Registration as a Patent Agent

The Patents (Amendment) Act, 2005 lays down the following conditions for the registration of a person as a patent agent:

- s/he is a citizen of India;
- has completed the age of 21 years;
- has a degree in science, engineering or technology from any university established under law in India or possesses such other equivalent qualifications as specified by the Central Government in this regard, and in addition
 - has passed the qualifying examination for this purpose, or [alternatively]
 - has functioned either as an examiner or a Controller or both for at least ten years, but has ceased to hold any such capacity at the time of making the application for registration as a patent agent;
- s/he has paid the prescribed fee.

A person, who was registered prior to the commencement of the Patents (Amendment) Act, 2005 without fulfilling the above qualifications, will continue to act as a patent agent.

4.6.3 The Register of Patent Agents

The controller shall enter the names, addresses, other relevant particulars of persons fulfilling the above qualifications and the date of registration of every patent agent in the *register of patent agents*. The specimen signatures and photographs of the patent agents are also entered into the register. The register of patent agents can be kept by the controller in computer floppies, diskettes or in other electronic form, which is accessible only to a person duly authorized by the controller. The copy of the register of patent agents is maintained in all the branches of the patent office.

| | |
|---|--------------------------|
| Self Assessment Question | (Spend 3 minutes) |
| 3) What are the qualification for getting registered as a patent agent. | |
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| | |
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Any alteration in the name, address or qualification entered in the register can be effected through an application made to the controller.

The continuance of a person's name in the register is subject to the payment of prescribed fees regularly. Non-payment of the fee (to be paid yearly) is a ground for removal of the name from the register of patent agents.

A person, who is not so registered cannot practice or describe or represent himself as a patent agent either alone or in partnership with any other person, unless he and all his partners are so registered. Similarly, a company or any body corporate cannot describe itself or hold out as patent agents or permit itself to be so described. Practice as a patent agent, in this context, includes the following acts:

- i) applying for or obtaining patents in India or elsewhere;
- ii) preparing patent specifications or other documents under the Patents Act or the patent law of any other country;
- iii) giving advice other than of technical or scientific nature as to the validity of patents or their infringement.

4.6.4 Disqualifications for Registration as a Patent Agent

A person can be refused registration as a patent agent if s/he-

- has been adjudged of an unsound mind by a competent court;
- is an insolvent;
- has been convicted for an offence with imprisonment within or outside India;
- being a legal practitioner has been guilty of professional misconduct; or
- being a chartered accountant, has been guilty of negligence or misconduct.

4.6.5 Removal of the Name from the Register of Patent Agents

The Controller may remove the name of a person from the register of patents, after providing an opportunity of being heard to that person and holding an inquiry if required, for the following reasons:

- a) if his name has been entered in the register by mistake or on account of misrepresentation or suppression of any material fact; or
- b) if he has been convicted of any offence and sentenced for imprisonment or has been guilty of professional misconduct which, in the opinion of the controller, renders him to be unfit to be kept in the register; or
- c) if he makes a written request to the controller; or
- d) if he has defaulted in the payment of the prescribed fees.

The fact of removal of the name of any person from the register has to be published and communicated to the person concerned. The controller may, however, restore the name of any such person in the register, on reasons being shown in the application made by the person thereto.

The controller has the power to refuse to deal with certain agents as stated in the Act, that is, that he may refuse to recognize any person as an agent whose name has been removed from the register for the above stated reasons and has not been restored or if he is not registered patent agent, or in the case of a company or a firm, if any person to whom the controller may refuse to recognize as an agent, is acting as a director or manager of the company or a partner of the firm. The controller will also not recognize any person as an agent who neither resides nor has a place of business in India.

4.7 TRAINING OF PATENT AGENTS

As the role of a patent agent is very crucial in the grant of a patent, his proper training in the drafting of patent specification and communication with the clients is of utmost importance. While some Indian patent agents do provide satisfactory professional services, widespread dissatisfaction does exist in respect of the quality of work of Indian patent agents in general. The dissatisfaction expressed relate to a range of issues, such as the quality of drafting, lack of professional advice or assistance, poor communication with the clients, etc. Adequate services in areas such as conducting a prior art search, or drafting patent applications are felt to be lacking. This requires a proper training and orientation in these matters.

Presently, there is no systematic training program available in India for those intending to become patent agents. A degree in science, engineering or technology is all that is necessary to appear for the patent agent's examination (Section 126(1)(c)). Such a degree does not provide any training in patent procedure. While in other countries, substantial training is provided by working under a registered patent agent for a number of years before appearing for the patent agent's examination. In Europe, a person wishing to become a patent agent has to have a recognized technical degree and has to have completed three to six years of training, before being permitted to appear for the patent agent's examination. There is thus a need for providing systematic training to those appearing for the patent agent's examination as well as for those practicing as patent agents.

The handling of patents requires both legal and technical knowledge and skills. A patent is for an invention, an advance over previous knowledge. The drafting of the patent document requires substantial technical knowledge. Yet it also requires knowledge of the Patent Act and Rules, the latest judgments in the area and their impact on the manner of framing the patent application. Procedural rules related to the presentation of a case in the form of replies to objections or at hearings, and legal principles such as natural justice and *res judicata* play an important part in framing a patent strategy. Patent agents as well as patent controllers and examiners need to be familiar with these legal principles.

In order to have both the technical and the legal training required of a patent agent, a proper training must be imparted through an institution, such as National Institute of Intellectual Property Management [NIIPM, which has been recently constituted in place of IPTI], Nagpur, by conducting courses on a regular basis. On-line courses can also be conducted in close collaboration with the WIPO Academy [World Intellectual Property Organization]. To this end, the assistance of existing educational institutions such as Universities and also of subject experts with practical experience ought to be enlisted. Continuing education programs and advanced training programs should also be conducted for providing training to registered patent agents. This would enable the development of qualified, professional patent practitioners, who would be able to advise and help Indian inventors in patent filing of international standards. The creation of a large pool of such qualified persons would also enable the appointment of more patent examiners, which would assist in the reduction of pending applications at the Patent Office and go a long way towards making the Indian Patent Office an efficient International Search Authority.

4.8 TRAINING OF PATENT EXAMINERS

India has recently being granted the status of the International Searching Authority (ISA) and International Preliminary Examination Authority (IPEA) under the Patent Co-operation Treaty (PCT) of WIPO, which will become operative shortly. from June 2008. The major advantage of India getting the ISA and IPEA status is that the IPOs will be able to generate significant revenues by way of searches and examinations of PCT applications. Most important, it will improve the quality of patent searches. However, this would require extensive training of patent examiners and procurement/exchange of national and international databases so that its searches for novelty and inventive step are of international standards. There are high standards of patent searches followed by the patent offices of developed countries and certain developing countries like China, Korea and Brazil.

Furthermore, in 2005, India had switched over to product patent regime from process patent in inventions pertaining to chemicals, pharmaceuticals and drugs. As a part of TRIPS Agreement, patents are to be made available in all fields of technology, including the new and emerging technologies such as biotechnology, information technology, bioinformatics, electronics, genomic, nano-technologies, etc. These developments require a pool of well-trained patent examiners to carry out these functions in an efficient manner. This, in turn, requires an improvement in the efficiency of the patent examiners, by having more training programmes at regular intervals for them. With the introduction of pharmaceutical product patents in India, this ought to be a major area of focus.

The Indian Patent Office does not possess an in-built training academy or institute. In order to hone their skills and improve the standard of patent searches, the Government of India had set up the Intellectual Property Training Institute (IPTI) at Nagpur in 2001 with a view towards facilitating the:

..creation, use and exploitation of intellectual property and act as a nodal agency in the country for fulfilling the need of education and training on IPR. IPTI is supposed to play a prominent and unique role in creating IP-oriented culture in India and strive for achieving the desired level of promotion and awareness of IPR in the country

The IPTI's objectives highlighted its specific mandate to *'fulfill all internal training needs of IP offices by organizing training and refresher courses for offices as well as staff dealing with IP matters at regular intervals.'* It is also to *'act as a nodal agency in training and education of IPR in the country to all types of IP-stakeholders and conduct seminars/workshops/interactive sessions on IPR in a well-planned and systematic manner, on its own and in collaboration with prominent organizations'*. The IPTI began its effective functioning from August, 2002. It has now been replaced by the National Institute of Intellectual Property and Management (NIIPM) in August 2007 with wider objectives.

The IPTI during its short span was imparting training to new examiners each year (in batches of 10), through an intensive 2 week training programme. The faculty was comprised of senior officers from the patent office and IPTI/PIS [Patent Information System]. Due to the bureaucratic set-up of the IPTI, the training programmes were not carried out on a regular basis. The thrust of the training in patents was on the following areas:

- a) Patent Examination
- b) Patent searches
- c) Patent System in India

Training on new areas of technology, such as biotechnology, software/IT, electronics and pharmaceuticals was conspicuously missing. The training material/modules prepared for the purpose were also not up to the mark. They are not comprehensive enough. Beside providing information on the basic aspects of different IPRs, they did not provide much analytical approach on different IPR issues nor did they have any judicial analysis.

The effective training must also be accompanied by a good training infrastructure, viz., a good library and internet facility with linkages to good database for patent searches. These resources were not of an adequate standard at the IPTI. The IPTI library was ill-equipped to support training activities for examiners. There was a small number of books on IPRs and on different science subjects, and there was a serious dearth of specialized IP Journals and non-patentable database, which is very important for patent searches. In the new set-up of NIIPM, there is an urgent need to subscribe to more IP journals. Similarly, at present there is no electronic training material, except for audio-visual material that is used in training, such as LCD, OHP and CD-ROMS. This requires urgent attention, as mere imparting training in best practices is not enough but it must be supported by good infrastructure in terms of library and other training material. Furthermore, in terms of access to patent databases, the IPTI was similarly positioned as the

patent office, i.e., while there is access to some proprietary databases which are accessible free of charge, access to some of the important ones such as Delphion and Micropat is still lacking. It is important that a searchable national database should be created and made accessible on-line. A search-engine should be procured to provide a proper training in the patent searches world-wide, which will help in granting a good patent.

It is also noticeable that after the training at IPTI that patent examiners attend soon after induction, there is no further orientation or refresher training of patent examiners. The training materials and manuals of IPTI need to be rewritten to take into account the developments in law and technology. This gets exacerbated by the fact that Indian Patent Act, 1970 has been amended several times with a new patent paradigm. In order to understand the complexities of the new IPR regime and its interface with new and emerging technologies such as pharmaceuticals, biotechnology, bioinformatics, telecommunication, IT, nanotechnology, etc. it is paramount for the Indian Patent Office to equip itself with regular training programmes and seminars. Given that most of the emerging technologies arise from outside India, the Indian Patent Office could consider a tie-up with a foreign university or Patent Office to provide such trainings at regular intervals at the training institute, such as IPTI/NIIPM.

Training of patent examiners in some jurisdictions is institutionalized and is quite intensive and carried out on a continuous basis. In the United States, the US Patent and Trademark Office (USPTO) requires examiners to attend extensive training provided by the agency on legal issues, on which examiners are periodically tested. To help ensure that new examiners have the requisite skills prior to promotion, USPTO has identified the knowledge, skills, and abilities needed for patent examiners and established training units in work groups for new examiners. The Japan's Industrial Property Training Institute, established in 1958 as an affiliated organization of the JPO, has two main purposes:

- Providing training necessary for industrial property-related operations to JPO officials;
- Providing training to outside attorneys, with the aim of strengthening their skills in drafting/prosecution and in cutting edge technology fields.

Similarly, in China, the State Intellectual Property Office of China (SIPO), set up a training centre in April 1996 to train officials and employees who engage in intellectual property work. Since 2002, the Shanghai authorities have promoted training courses for patent agents and have actively encouraged the training of IP professionals, while at the same time, subsidizing the training of IP professionals abroad. The authorities are so convinced of the importance of this sector, that they have announced their intention to popularize IP courses in universities and colleges and are currently engaged in the enlargement of current institutes specializing in IP related issues.

Korea's International Intellectual Property Training Institute (IIPTI) was set up in 1987 with the following objectives:

- 1) To train intellectual property experts
- 2) To promote an understanding of the importance of industrial property rights among the general public.

- 3) To do research and to make available information relating to industrial property
- 4) To serve the international community by providing training opportunities for intellectual property experts from other countries and to strengthen mutual cooperation towards the development of the intellectual property system.

Towards this end, the Institute offers the following courses for different stakeholders:

- 1) Courses for examiners and trial examiners at Korean Intellectual Property Office (IPO)
- 2) Courses for officials involved in economic affairs
- 3) Course for Judicial trainees
- 4) Courses for enforcement officials (police, customs etc)
- 5) Courses for educators
- 6) Course for the patent attorneys in apprenticeship
- 7) Courses for IP specialists
- 8) Course for researchers at research institutes

The NIIPM has broadly the same objectives. The Government is well-aware of the training needs of the patent examiners and beside establishing the NIIPM to undertake this activity, it has entered into agreements with the governments of the United States and the United Kingdom for imparting training to its examiners, beside taking the advantage of training scheme of the WIPO. It had also entered into an agreement with the European Union in 2005 for capacity building in IP of India. The EU-India Trade and Investment Programme (TIDP) – IPR Component was aimed, among others to impart training to patent examiners/officials in patent examination and searches, particularly in the new and emerging fields of technologies. In this context, ten training programmes were carried out focusing on i) chemicals, pharmaceuticals, biotechnology, bio-informatics; ii) electronics, information technology, nano-technology, electricals, etc. These intensive training programmes helped the examiners in understanding the nuances of these new areas of technologies. Apart from this, the examiners must be sent for training in advanced jurisdictions to get an idea about their working methodology. Such training, however, needs to be more structured and focused. At the end of the training of patent examiners, a formal mechanism for evaluation/validation be instituted to help in the determination of the level of absorption of training by examiners, as also to ensure that examiners take the training more seriously.

4.9 MODERNISATION OF PATENT OFFICES

It is now well demonstrated that India' legal regime on IPRs is TRIPS compliant, comparable with the advanced IPR legal regimes in the world. Apart from this legislative initiative, the Government of India has also taken various steps to enhance the quality of IP administration in the country. These include the construction of new integrated intellectual property offices at Chennai, Delhi, Kolkata and Mumbai, modernization of the physical infrastructure at the various IP offices, extensive computerization, re-engineering of procedures, human resource development and digitization of records to meet global standards at a considerable cost. However, there are still numerous shortcomings in terms of IP administration

and prosecution, leading to inefficiencies and delays, which have the potential to destroy the confidence of potential registrants.

It has been observed that though current modernization process has achieved certain milestones such as construction of new buildings, recruitment of technical as well as supporting staff, their training, clearance of backlog to certain extent, patent awareness creation and minimum computerization leading to enhanced output, it has not yet achieved its objectives to become comparable with the developed countries such as USPTO, EPO and JPO and developing countries such as KIPO (Korea), SIPO (China), Brazil, etc either in terms of infrastructure, computerization or in terms of manpower. In terms of becoming International Searching Authority or International Examination Authority, India has not yet matched even with Finland or Denmark. IPOs are also unable to meet demand of growing patents applications to dispose them in a reasonable time-frame. They have yet to achieve and adopt the automated work procedure. Due to such shortcomings, the enhanced filing trend in the patent applications has become challenging to manage. Thus, the aims and objective of the further modernization are :

- To provide strong and reliable protection to IPRs in India;
- To achieve global excellence in IPR related services in India;
- To attract investment in India in general and in R&D in particular;
- To attract and retain best brains in R&D in India;
- To create India as a technology hub for social, economical and technological development;
- To establish India as an internationally competitive intellectual property office as the International Searching Authority (ISA) and the International Preliminary Examination Authority (IPEA);
- To act as knowledge depository for Indian universities, R&D institutions and industry; and
- To provide strong protection for indigenous/traditional knowledge including biological diversity in India.

Presently number of constraints and gaps exist in fulfilling these objectives, viz.:

- Rising filing trend in IP applications – There has been tremendous increase in patent applications in the last five years and enhanced rate of grant of patents with the reduced time frame. But this has not matched with the infrastructure support.
- Insufficient infrastructure
- Insufficient manpower for timely disposal – There are less than 150 patent examiners/controllers in the patent office to deal with increasing work-load.
- Lack of database for search – Electronic database is an important aspect and proves to be backbone of any modernised IPR Office. Unfortunately, Indian Patent Office is yet to have a complete usable database in searchable form or back office data management system in electronic form. In the absence of any search tool, it becomes difficult to conduct novelty searches,

as it requires to visit databases of separate countries individually. There is thus an urgent need to develop a comprehensive, searchable database, completely compatible with the application software to facilitate the easy and early disposal of the patent applications. In addition, there is also the need for procurement of suitable search tools and databases such as STN, DIALOGUE, EPOQUE, DOLPHIN, M-CAM, Delphion and Micropat etc with worldwide patent information. Such access to databases is critical, now that India has moved to an absolute 'novelty' standard. The government should also commission the creation of a customized search engine that would aid the search process within the IPO. Given India's IT prowess, it is only fitting that the IPO have the benefit of a sophisticated internal search engine. Currently, there is no access even to certain databases developed in India such as the TKDL database.

- Lack of computerized work process/Co-ordination - Despite embarking on computerization of the patent offices in the first phase of modernization, there is still no inter-connectivity between the different patent offices, with the result that there is little co-ordination between them. It also unduly delays the decision-making process as well as affecting the output of these offices. There has not been much information available on websites on the processing of application on different IPRs. In fact, so far computerization has been confined only with the deliverance of computers to the officials of the patent office with internet connections. But to make them totally computerized, there is a further need of computerizing the work process. There has to be a central computer to access the information from all the offices, granting of patent etc. The patent offices should be computerized on the lines of developed countries, which should be able to provide required information on line to the stakeholders.
- Need to Improve the Number and Efficiency of Examiners- Owing to the increasing number of patent applications filed, more patent examiners need to be appointed to cope with the increasing burden of patent searches and examination. Currently the number of patent examiners is not adequate in consonance with the quantum of work at the patent offices. The sectoral assignment of patent applications is also not strictly observed. With the increase in number of patent examiners in different areas of technology, it would then be easier to allot examiners with specific technological backgrounds to their respective areas of expertise and in that process, the quality of examination will also be enhanced.
- Improved Training - Beside increase in number, the continuous training of patent examiners, as stated above is required.
- Lack of career progression schemes - Currently attrition rate at the patent offices is quite high beside not able to draw best brains according to need. The examiners, after being trained for some years switch over to other jobs with better career prospects. This requires an urgent attention to address this problem by devising better career progression scheme with timely promotions and other incentives.
- Increased Library Resources - The Patent Office library is not well equipped and more patent books ought to be procured. Similarly, the office ought to subscribe to all the leading IP journals in the world.

- Patent Manual – The Manual of Patent Practice used by patent examiners has not kept the pace with the new developments in technology. They ought to be finalized and improved, with specific sections on the complex technological areas, such as pharmaceuticals, biotechnology, electronics, information technology etc.
- It is also important that the patent office should be granted some administrative and financial autonomy, which will help in improving its efficiency.

4.10 INTRODUCING PATENT EDUCATION IN SCIENCE COLLEGES

Despite the fact that India has a large pool of well trained scientists and technocrats, there are very little inventive and innovative activities to register. A close look on the filing of patent applications bear out the fact that patent filing is predominantly done by the foreign nationals/companies. The most obvious reason for this state of affairs is the lack of IP awareness and training facilities existing in the country. With regard to IPR awareness in India, despite many efforts of the Government of India, a lot requires to be done on this front. A nation-wide IPR awareness campaign is required to sensitise different stakeholders in the Indian society. This includes large corporates, small and medium sized enterprises, universities, civil society organisations, academia, IPR professionals, etc. An important aspect to this is that the same target groups need to be sensitised at different levels such as:

- Introductory programme on IPRs
- Semi-Advanced programme on IPRs
- Advanced programme on IPRs

Furthermore, programmes on management, valuation, licensing of IPRs too should be conducted so that the stakeholders appreciate the practical aspects of IPRs. More importantly, the IP/patent education should be introduced in the science and technology institutes at the graduate level. The students should be provided with the basic knowledge of patents, criteria of patentability, advantages of patent and exposure to the consequences of maintainability and infringement of patents. At present, except in certain technology and management institutes, IP courses are not offered in the science colleges. This leaves out a large segment of society, which can be potential innovators/inventors. Students can learn the nuances of patent while mastering the particular science subject. It can be made as a part of existing subjects or can be introduced as a separate paper. In this regard, India should take a clue from China, where the authorities, convinced by the importance of IPRs, are making efforts to popularize IP courses in universities and colleges and have introduced these courses in the current institutes specializing in IP related issues.

4.11 SUMMARY

- The patent offices has its headquarter in kolkata and three branch offices in Mumbai, Chennai, and New Delhi.
- The Controller General as per the patent Act enjoys the powers of a civil court, as provided under the code of civil procedure, 1908.

- Controller has the power to amend and correct clerical errors in the patent or patent specifications.
- A patent agent should be well trained in the drafting of patent specification and communication with the clients as it is important for the grant of a patent.

4.12 TERMINAL QUESTIONS

- 1) Discuss the powers of the controller general?
- 2) a) Discuss the rights of a patent agent?
b) Mention the qualification as well as disqualification for registration as a patent agent?
- 3) Write a note on the training of patent agents?

4.13 ANSWERS AND HINTS

Self Assessment Questions

- 1) a) Kolkata
b) Mumbai, Chennai and New Delhi.
- 2) a) The name and addresses of grantees of patents.
b) Notifications of assignments and of transmission of patent, of licenses under patents, and of amendments and revocation of patents; and
c) Particulars of such other matters affecting the validity or proprietorship of patents as may be prescribed.
- 3) a) A citizen of India.
b) Has completed the age of 21 years.
c) Should have a degree in science, engineering or technology from any University established under law in India or possess such other equivalent qualifications as specified by the central government in this regard, and in addition.

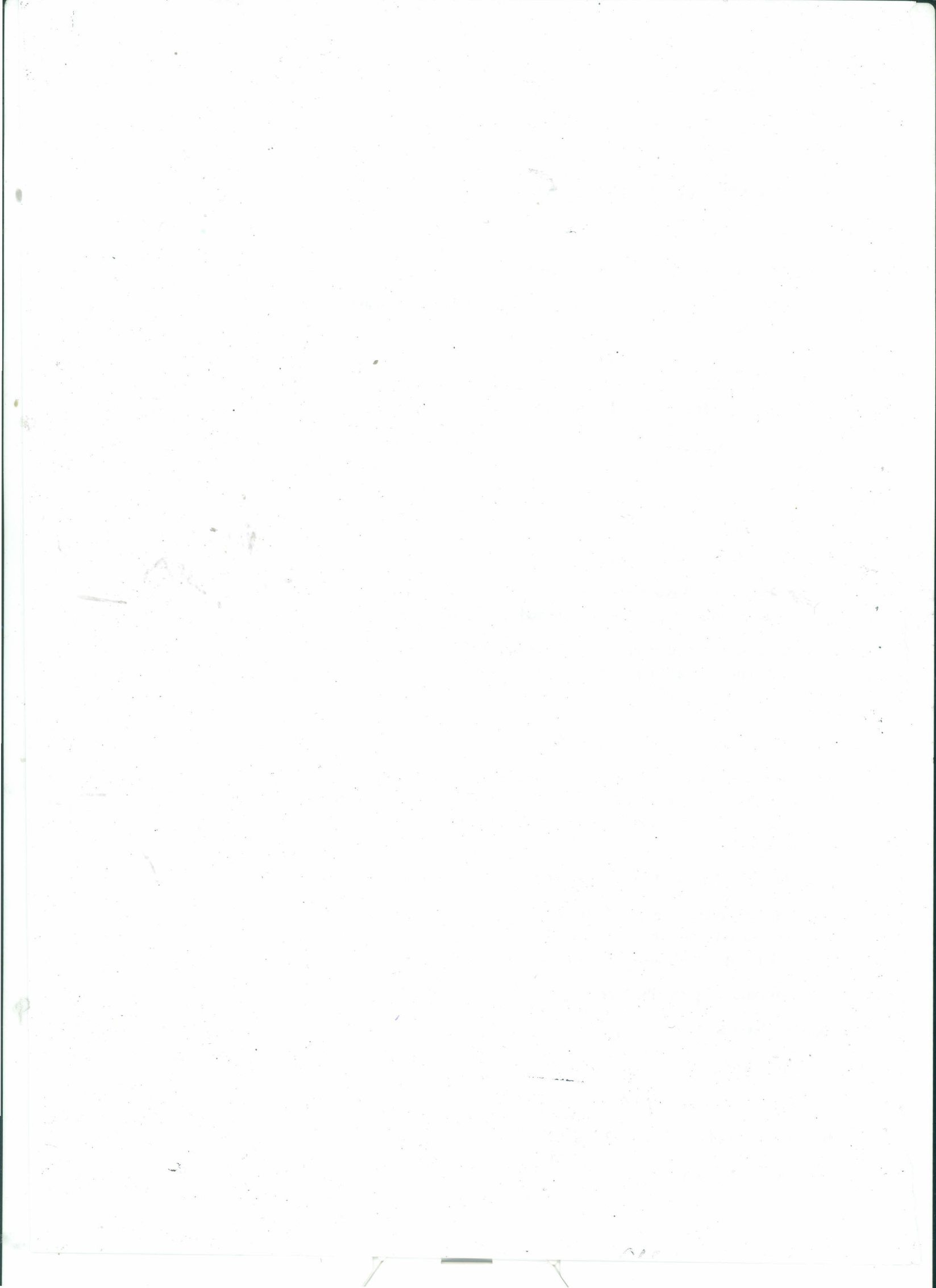
Has passed the qualifying examination for the purpose or

Has functioned either as an examiner or a controller or both for at least ten years, but has ceased to hold any such capacity at the time of making the application for registration as a patent agent.

Has paid the prescribed fees.

Terminal Questions

- 1) Refer to Section 4.4
- 2) a) Refer to Sub-section 4.6.1
b) Refer to Sub-section 4.6.2 and 4.6.4
- 3) Refer to Sub-section 4.7



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