

## Experiment-1.2

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### Aim of the Experiment:

Write an article on topics given below:

- What are Patents.
- Discuss about the patentability criteria and inventions that can't be patented.
- Discuss about specifications of Patent.
- Patent offices in INDIA
- Discuss the Flow chart of Patent Granting System.

### Technical Article:

Q1 What are Patents?

A patent is a legal document granted by a government authority, typically a patent office, that gives the patent holder the exclusive right to use, make, sell, and license an invention for a limited period, usually 20 years from the filing date. Patents serve as a reward for innovation by providing inventors with a monopoly over their inventions, allowing them to recoup their investment and profit from their creations.

#### Types of Patents

##### Utility Patents:

These are the most common type of patents and cover inventions such as machines, processes, compositions of matter, and improvements thereof. Utility patents protect the functional aspects of an invention and are granted for new and useful inventions.

##### Design Patents:

Design patents protect the ornamental or aesthetic appearance of a product. They are granted for new, original, and ornamental designs for articles of manufacture. Unlike utility patents, design patents do not protect the functional aspects of an invention but rather its visual appearance.

##### Plant Patents:

Plant patents are granted for new and distinct varieties of plants that have been asexually reproduced. This includes plants such as hybrids, mutants, and newly found seedlings.

#### Requirements for Obtaining a Patent

##### Novelty:

The invention must be new and not previously disclosed to the public. This means that the invention cannot have been patented, described in a printed publication, or publicly disclosed in any way prior to the patent application filing date.

**Non-obviousness:**

The invention must not be obvious to someone skilled in the relevant field of technology. In other words, the invention must involve an inventive step that is not merely an obvious improvement over existing knowledge or technology.

**Utility:**

The invention must have a practical utility and be capable of being used or applied in some way.

**Patentable Subject Matter:**

The invention must fall within the statutory categories of patentable subject matter, which typically include processes, machines, manufactures, compositions of matter, and improvements thereof.

**Benefits of Patents**

**Monopoly Rights:**

Patents grant inventors exclusive rights to their inventions, allowing them to prevent others from making, using, selling, or importing the patented invention without their permission.

**Incentive for Innovation:**

Patents provide inventors with a financial incentive to invest in research and development by allowing them to profit from their inventions. This encourages innovation and promotes technological progress.

**Market Advantage:**

Patents can provide a competitive advantage in the marketplace by allowing inventors to differentiate their products from competitors' offerings and establish a unique selling proposition.

**Licensing Opportunities:**

Patent holders can license their patents to others in exchange for royalties, generating additional revenue streams and leveraging their intellectual property rights.

**Disclosure of Information:**

In exchange for the exclusive rights granted by a patent, inventors are required to disclose their invention in detail in the patent application, contributing to the body of technical knowledge and facilitating further innovation.

**Q2 Discuss about the patentability criteria and inventions that can't be patented.**

Patentability criteria are the standards that an invention must meet in order to be eligible for patent protection. While patents are essential for incentivizing innovation and protecting intellectual property, not all inventions qualify for patent protection. Understanding the patentability criteria is crucial for inventors and businesses seeking to secure patent rights for their innovations. Additionally, there are certain types of inventions that are explicitly excluded from patent protection. Let's delve into these aspects:

**Patentability Criteria:**

**Novelty:**

One of the fundamental requirements for obtaining a patent is that the invention must be novel, meaning it must be new and not disclosed to the public prior to the patent application filing date. If an invention has been previously patented, described in a printed publication, publicly demonstrated, or otherwise disclosed to the public, it may no longer be considered novel.

#### Non-obviousness:

In addition to being novel, the invention must also involve an inventive step that would not have been obvious to someone skilled in the relevant field of technology. This criterion prevents the grant of patents for inventions that are mere trivial modifications or combinations of existing knowledge or technology.

#### Utility:

The invention must have a practical utility and be capable of being used or applied in some way. In other words, the invention must serve a useful purpose or provide some tangible benefit to society.

#### Patentable Subject Matter:

The invention must fall within the statutory categories of patentable subject matter, which typically include processes, machines, manufactures, compositions of matter, and improvements thereof. Abstract ideas, laws of nature, and natural phenomena are generally not considered patentable subject matter.

#### Enablement and Written Description:

The patent application must contain a written description of the invention that is sufficient to enable a person skilled in the relevant field to make and use the invention without undue experimentation. Additionally, the patent application must disclose the invention in a manner that meets the enablement requirement, meaning that the invention must be described in sufficient detail to enable someone skilled in the art to practice the invention.

#### Inventions That Can't Be Patented:

While patents are intended to incentivize innovation and protect intellectual property, there are certain types of inventions that are explicitly excluded from patent protection:

##### Laws of Nature:

Discoveries of laws of nature, natural phenomena, and abstract ideas are not eligible for patent protection. For example, mathematical formulas, scientific principles, and fundamental truths about the universe cannot be patented.

##### Natural Substances:

Naturally occurring substances, such as minerals, naturally isolated biological materials, and naturally existing organisms, are generally not patentable. However, certain genetically modified organisms or isolated and purified natural substances may be eligible for patent protection if they meet the patentability criteria.

##### Methods of Medical Treatment:

Methods of medical treatment performed on the human body are typically excluded from patent protection. This includes surgical techniques, therapeutic methods, and diagnostic methods.

##### Aesthetic Designs:

While designs that are purely aesthetic or ornamental in nature may be eligible for design patents, they are not eligible for utility patents unless they have a functional aspect.

**Inventions Contrary to Public Policy or Morality:** Inventions that are contrary to public policy or morality, such as inventions related to human cloning, offensive weapons, or illegal activities, are generally not eligible for patent protection.

### Q3 Discuss about specifications of Patent.

Specifications of a patent refer to the detailed description of an invention contained within a patent application. These specifications serve as a blueprint for understanding the invention and are crucial for determining the scope of patent protection granted to the inventor. A well-written patent specification provides clear and comprehensive disclosure of the invention, enabling others skilled in the art to understand, replicate, and build upon the invention. Here's a breakdown of the key components of patent specifications:

#### Title:

The title of the patent provides a concise and descriptive name for the invention. It should accurately reflect the nature and purpose of the invention.

#### Abstract:

The abstract is a brief summary of the invention, typically consisting of a few sentences or paragraphs. It provides an overview of the technical field, the problem addressed by the invention, the solution proposed, and the key features of the invention.

#### Background:

The background section provides context for the invention by describing the technical field to which the invention pertains and discussing any existing solutions or prior art related to the problem addressed by the invention. This section helps readers understand the motivation and rationale behind the invention.

#### Summary of the Invention:

The summary of the invention outlines the basic concept and key features of the invention in clear and concise language. It highlights the novel aspects of the invention and its potential advantages over existing solutions.

#### Detailed Description:

The detailed description is the heart of the patent specification, providing a thorough and detailed explanation of the invention. It includes a written description of the invention, along with any drawings, diagrams, or figures necessary to illustrate the invention.

#### Claims:

The claims define the scope of the invention and establish the legal boundaries of the patent protection. They set forth the specific features or elements of the invention that are considered novel and inventive. Patent claims are typically drafted in legal language and must be clear, precise, and supported by the description in the specification.

#### Drawings:

Drawings or illustrations are often included in the patent specification to provide visual representations of the invention. Drawings help clarify the written description of the invention and provide additional details that may not be easily conveyed through text alone. They are especially important for inventions with complex or technical features.

#### References:

The patent specification may also include references to prior art, related patents, scientific literature, or other relevant documents. These references help establish the novelty and inventiveness of the invention by demonstrating how it differs from existing knowledge or technology.

#### Q4 Patent offices in INDIA

The Indian Patent Office (IPO) is the principal agency responsible for processing patent applications and granting patents in India. With its headquarters in Kolkata, the IPO operates under the auspices of the CGPDTM and maintains branch offices in Delhi, Mumbai, and Chennai. These branch offices handle patent applications filed in their respective jurisdictions and provide services such as patent examination, publication, and registration.

In recent years, the Indian patent system has undergone significant reforms aimed at streamlining patent procedures, enhancing efficiency, and strengthening intellectual property rights. Key initiatives include:

Implementation of online filing and processing of patent applications to improve accessibility and reduce processing times.

Introduction of expedited examination procedures for certain categories of patent applications, such as those related to green technology and startups.

Adoption of international patent classification systems to harmonize classification standards and facilitate patent searches and examinations.

Promotion of innovation and entrepreneurship through initiatives such as the Startup India program and incentives for patent filing by small and medium enterprises.

#### Q5 Discuss the Flow chart of Patent Granting System.

##### Filing of Applications:

This is the first step of the patent process, where the applicant files the patent application with the patent office, along with the required fees and documents.

##### Provisional/Complete Specification:

This is the second step, where the applicant submits either a provisional or a complete specification of the invention. A provisional specification is a temporary document that describes the main features of the invention, while a complete specification is a final document that describes the invention in detail, along with the claims and drawings.

##### Publication:

This is the third step, where the patent office publishes the patent application in the official journal, after 18 months from the priority date or the filing date, whichever is earlier. The publication makes the patent application available to the public for inspection and opposition.

##### First Examination:

This is the fourth step, where the patent office conducts a formal examination of the patent application, to check if it meets the requirements of the Patents Act and Rules. The patent office may issue a first examination report, which lists the objections or deficiencies in the patent application, and requests the applicant to rectify them within a specified time period.

#### Application Examination by Patent Examiner:

This is the fifth step, where the patent office assigns a patent examiner to conduct a substantive examination of the patent application, to assess its patentability. The patent examiner searches for prior art, which are documents or information that disclose the same or similar invention as the patent application. The patent examiner may issue an examination report, which states the grounds for granting or refusing the patent, and invites the applicant to respond within a specified time period.

#### Opposition:

This is the sixth step, where the patent office allows any person to file an opposition against the patent application, either before or after the grant of the patent. The opposition is a legal challenge to the validity of the patent application, based on the grounds specified in the Patents Act and Rules.

#### Pre Grant-Opposition:

This is the seventh step, where the patent office allows any person to file a pre-grant opposition against the patent application, within six months from the date of publication of the application, or before the grant of the patent, whichever is later. The pre-grant opposition is filed in writing, along with the evidence and fees, to the patent office. The patent office then notifies the applicant and the opponent, and conducts a hearing to decide on the outcome of the opposition.

#### Patent Grant:

This is the eighth step, where the patent office grants the patent to the applicant, if there are no successful pre-grant oppositions, or if the applicant has overcome the objections or deficiencies in the patent application. The patent office issues a patent certificate to the applicant, which confers the exclusive rights to the invention for a term of 20 years from the filing date of the application.

#### Issue of Patent Certificate:

This is the ninth step, where the patent office issues a patent certificate to the applicant, which is the official document that proves the ownership and validity of the patent. The patent certificate contains the patent number, the title of the invention, the name and address of the applicant, the date of filing and grant, the term of the patent, and the abstract of the invention.

#### Post Grant Opposition:

This is the tenth step, where the patent office allows any person to file a post-grant opposition against the granted patent, within one year from the date of publication of the grant of the patent. The post-grant opposition is filed in the same manner as the pre-grant opposition, and the patent office follows the same procedure to decide on the outcome of the opposition.

#### Hearing:

This is the eleventh step, where the patent office conducts a hearing to hear the arguments of the applicant and the opponent, in case of a pre-grant or a post-grant opposition. The hearing is a quasi-judicial proceeding, where the patent office acts as the adjudicator, and follows the principles of

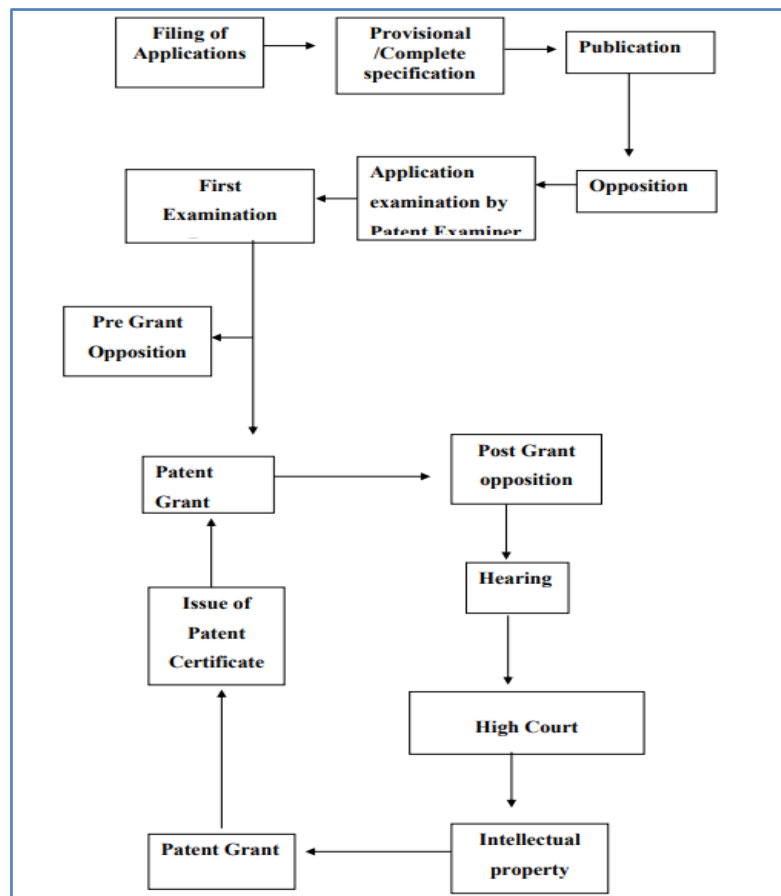
natural justice and fair play. The patent office may allow the parties to submit oral or written submissions, evidence, or witnesses, and may also appoint an expert or a scientific advisor, if necessary. The patent office then passes an order, which either upholds or rejects the opposition, and either grants or revokes the patent.

### High Court:

This is the twelfth step, where the patent office refers the matter to the high court, in case of a complex or contentious issue, or where the patent office is unable to decide on the outcome of the opposition. The high court is the judicial authority that can review the decisions of the patent office, and can also entertain appeals or writ petitions related to patent matters. The high court follows the rules and procedures of the civil court, and applies the law and evidence to the facts of the case. The high court then passes a judgment, which either confirms or reverses the order of the patent office, and either grants or revokes the patent.

### Intellectual Property:

This is the final step, where the patentee obtains the intellectual property rights to the invention, as conferred by the patent certificate. The intellectual property rights are the legal rights that protect the creation and innovation of the patentee, and prevent others from using, making, selling, or importing the invention without the patentee's permission. The intellectual property rights also enable the patentee to exploit the invention commercially, by licensing, assigning, or transferring the patent to others, or by using the patent as a bargaining tool or a source of income.





**Viva questions and answers (very short type):**

1) What is a patent?

A patent is a legal document granted by a government authority that gives the patent holder the exclusive right to use, make, sell, and license an invention for a limited period, usually 20 years from the filing date.

2) What are the types of patents?

Utility patents, design patents, and plant patents.

3) What are the requirements for obtaining a patent?

Novelty, non-obviousness, utility, and compliance with patentable subject matter.

4) What are the benefits of patents?

Monopoly rights, incentive for innovation, market advantage, licensing opportunities, and disclosure of information.

5) What are the patentability criteria?

Novelty, non-obviousness, utility, and compliance with patentable subject matter.

6) What types of inventions cannot be patented?

Laws of nature, natural substances, methods of medical treatment, aesthetic designs, and inventions contrary to public policy or morality.

7) What are the key components of patent specifications?

Title, abstract, background, summary of the invention, detailed description, claims, drawings, and references.

8) What is the role of the Indian Patent Office?

The Indian Patent Office is responsible for processing patent applications and granting patents in India.

**Learning Outcomes:**

1. Learned about Patents, Designs, Trade Marks and Copyrights.
2. Learned about Indian Patents Rights.
3. Learned about Indian Patent Offices and process of Patent Granting.