

FROM THE DESK OF INVENTOR

Q1. What is Invention?

An invention means a new or unique product, device, method, composition or process which involves an inventive step and has industrial applicability.

Q2. What is Innovation?

Innovation is the successful exploitation of new ideas in the form of conversion into a useful machinery or process, by any person, using own intellect.

Q3. What is difference between an invention & innovation?

In its purest sense, “invention” can be defined as the creation of a product or introduction of a process for the first time. “Innovation,” on the other hand, occurs if someone improves on or makes a significant contribution to an existing product, process or service. Every innovation may not be a patentable invention but almost every invention is an innovation and patentable.

Q4. How is ‘novelty’ component established in an invention for patenting?

Novelty is a feature which did not exist previously and which has not been disclosed in the *prior art* of a patent application. For an invention to be judged as novel, the disclosed information in a patent should not be available in the ‘prior art’. This means that there should not be any prior disclosure of any information contained in the patent application anywhere in the public domain, either in a written or in any other form, or in any language, before the date on which the application has been first filed i.e. the ‘priority date’.

Q5. How is ‘inventiveness’ element established in an invention?

According to the Indian patent law, inventiveness is the second major criteria in establishing the patentability of an invention. It is defined as a feature that involves technical advancement as compared to the existing knowledge and having social or economic significance or both and ultimately which controls the invention as not obvious to a person who is specialized in particular subject matter or is skilled in the art. The complexity or the simplicity of an inventive step does not have any barring on the grant of a patent. In other words a very simple invention can qualify for a patent. A mere part of invention is sufficient to establish a valid patent. In other words, even a simplest invention, if it qualifies the patent criteria (novelty, non-obviousness and utility) can be patented.

Q6. How is ‘utility’ defined in an invention?

Usefulness is one of the major criteria in patent to establish patentability. In fact, a patent can be obtained only for an invention that has usefulness and applicability. Usefulness should not be limited to commercial gain, but it must be ultimately beneficial for the society.

Q7. How are biological inventions different from other biomedical inventions?

Inventions pertaining to a material containing biological material, capable of reproducing itself or being reproduced in a biological system product consisting or a process by which such materials are produced, processed or used are known as Biological inventions

Biomedical inventions, on the other hand, employ principles of natural science to develop knowledge, interventions, or technology of use in healthcare or public health.

Q8. What are the necessary components contained in a patent document?

A patent application must have the following information:

Bibliographic: Title of the invention, date of filing, country of filing, inventor's name, assignee name and reference of cited documents etc in a structured format.

Background of the invention or State of the art:

Information on the state of art available on the date of filing his invention. It must also include shortcomings/drawbacks of the state of the art and the problems faced by the inventor.

Summary of the Invention: A brief summary of the invention indicating the nature and substance of the object of the invention. The summary will indicate the advantages of the invention. This section should present the general idea of the claimed invention in summarized form.

Description of the invention: Detailed description of the invention, duly supported by a series of workable examples. The invention has to be described in complete detail, so that any person, who is skilled in the art, can work out the invention.

Drawings: The drawings of a patent application describe the invention visually, using a chemical or mechanical structure, charts and graphs, and detailed relationships of features.

Claims: This is the most important component of the patent establishing inventor's rights over the state of the art. It is for this portion protection is granted. This has to be carefully drafted.

Also, Biotechnology inventions must have sequence listing if the application includes nucleic acid or amino acid sequences. If sequences are disclosed, every nucleic acid molecule that is at least ten nucleotides, and every protein that is at least four amino acids, must be included in the list. Sequence listing is required to be filled in a specific text format.

Q9. How can one define the claims?

Claims are the most important part of the patent specification. Patent claims are the part of a patent or patent application that defines the scope/boundaries of protection/ownership granted by the patent. The

claims are brief descriptions of the subject matter of the invention, eliminating unnecessary details and distinguishing the invention from what is old. The claims are the operative part of the patent. Novelty and patentability are judged by the claims, when patent is granted.

The major function of the claim or claims is to clearly define the scope of protection granted. The claims must be clear and concise and also be supported by and agree with the invention/innovation disclosed in the descriptive part of the patent specification.

Q10. How can one define Unity of Invention?

All the claims in the application for a patent must refer to the same inventive idea, i.e. they must all share one inventive concept. This is called as “Unity of invention”.

Q11. What are the different categories of independent claims stating unity of invention?

If the invention relates with the product, the independent claim is called a product claim. The different categories depend on the Product, Process for its manufacture and use of the Product, Process and Apparatus for carrying out the process etc.

E.g. if somebody has developed a Single nucleotide polymorphism (SNP), claims may be drafted for-

- A novel SNP
- A method of expressing SNP
- A kit utilizing the SNP

All of these claims are linked by the inventive concept that sequence A is new and inventive. Therefore, anything based on sequence A must share this property too. Similarly, for biopolymer produced from a Genetically Modified Organism, the claims may be like- Biopolymer per se, Process for manufacture of biopolymer, and use of the Biopolymer, process for biopolymer manufacturing and its use or application. These things constitute unity of invention.

Q12. What is sufficiency of disclosure?

It means that the complete specification (techno-legal document describing the invention) should disclose the invention completely, so that a person skilled in the art can work on the invention. Following things need to be examined to check this aspect, like whether:

- a. The specification is properly titled.
- b. The subject matter is fully and particularly described in the specification.
- c. The claims define the scope of the invention properly.
- d. The Specification describes the best method of performing the invention or not.
- e. The source and geographical origin, in case of inventions related to biological materials, has been disclosed.
- f. Approval obtained from Biodiversity Authority, wherever applicable.

Accession number and other details of the depository are given, if applicable.

Q13. Is there any difference in the filing of patent application in respect of microbiological and other inventions?

A microbial invention may be described as an invention wherein microbes constitute the basic ingredient in the invention. To obtain legal protection in terms of a patent, a complete disclosure is required in the form of complete specification but sufficient disclosure may not be always possible in the microbial invention. The inventor is therefore required to deposit the strain of a microorganism in a recognized International depository authority (IDA) before filing a patent application. The IDA assigns a registration number to the deposited microorganism. This number needs to be quoted in the patent application. Further, samples of strains can be obtained from the depository for further working on the patent. There are many international depositories in different countries, which are recognized under the Budapest Treaty. This is a specific requirement only for microbial inventions.

Q14. What is an International Depository Authority (IDA)?

An International Depository authority is essentially a culture collection facility, recognized by the World Intellectual Property Organization (WIPO), Geneva in accordance with the Budapest Treaty for the deposition of microbial strain for patents filed based on microbial inventions. As of now, the WIPO has recognized 46 facilities as IDA in various countries. An applicant needs to deposit the strain in only a single IDA.

Q15. Is there an International Depository Authority (IDA) in India?

There are two WIPO recognized IDAs in India,:

1. Microbial Culture Collection (MCC), National Centre for Cell Science (NCCS), University of Pune Campus, Ganeshkhind Pune-411007, Maharashtra, India, <http://www.nccs.res.in>
2. Microbial Type Culture Collection and Gene Bank (MTCC), Institute of Microbial Technology (IMTECH), Council of Scientific and Industrial Research (CSIR) Sector 39-A, Chandigarh - 160 036, India, <http://mtcc.imtech.res.in>

Q16. What are the different kinds of inventions which are not patentable in India?

An invention may satisfy the condition of novelty, inventiveness and usefulness but it may not qualify for a patent under the following situations, as referred in India Patent Act 1970, Section 3:

(a)an invention which is frivolous or which claims anything obviously contrary to well established natural laws; (b) an invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment; (c)the mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substance occurring in nature;

- (d) 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 of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant. Explanation.—For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy;
- (e) 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;
- (f) the mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;
- (g) Omitted by the Patents (Amendment) Act, 2002
- (h) a method of agriculture or horticulture;
- (i) any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic THE PATENTS ACT, 1970 Page 9 or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.
- (j) 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;
- (k) a mathematical or business method or a computer programme per se or algorithms;
- (l) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions;
- (m) a mere scheme or rule or method of performing mental act or method of playing game;
- (n) a presentation of information;
- (o) topography of integrated circuits;
- (p) an invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.

Q17. What is the patenting process of an invention?

A patent application is processed at the relevant patent office. Following steps need to be taken while proceeding with a patent application and thereby converting an invention into a patent application:

- Firstly, a patentability search is conducted for establishment of patentability in terms of fulfilling the criteria of a patent. Then, the patent applications are drafted generally in consultation with a patent attorney or a patent agent.
- Filing of the application is accompanied with the execution of Declaration of invention and an Assignment under which the inventor(s) assigns his / her rights in the patent to the ICMR (in case of ICMR funded research).
- A request for examination is to be filed within a period of 48 months from filing date of complete specification.

- The patent application is published 18 months after initial filing and then examined by the Indian Patent Office, following the examination, the patent office may grant the patent or reject or seek changes through the issue of a so called First Examination Report (FER) or action required by the applicant in the application submitted.
- This letter sent by the Indian Patent Office is referred to as an Office Action or Official Action. The applicant or his legal nominee must file a written response, usually within three to six months.
- The patent attorney (legal representative of the applicant) responds to the FER through appropriate response which may include amending the claims and/or make changes to satisfy the queries raised in FER.
- This procedure is generally referred to as patent prosecution. During the prosecution process, inputs from the inventor(s) are often needed to enable the patent attorney understand the technical aspects of the invention and/or the prior art cited against the application to enable submission of a satisfactory response to the FER. Often two there could be two Official Actions and two responses that are legally permissible.

Q18.What is the next step for a patent application filed provisionally?

After filing a provisional application, the inventor(s) has to file a complete specification, with full patent claims, within one year from the filing date (priority date) and decisions also may be taken on foreign filings. The inventor may add further findings or modification in his/her invention within this one year window period.

Q19. What are different kinds of patent applications?

The following types of applications for patent can be filed:

1. Ordinary Application
2. Convention Application
3. PCT International Application
4. PCT National Phase Application
5. Application for Patent of Addition
6. Divisional Application
7. Start Up application

Q20. What is an Ordinary Application?

A patent application filed for the first time in the patent office without claiming any priority from application made in convention country or without any reference to other application under process is known as an ordinary application.

Q21. What is a Convention Application?

An application for a patent filed in respect of an invention, claiming a priority date based on the same or substantially similar application filed in one or more of the convention countries are called as a Convention Application. A convention application should be filed within **12 months** from the date of earliest priority application. It should be noted that a provisional specification cannot be used to file a Convention Application.

Q22. What is a PCT International application?

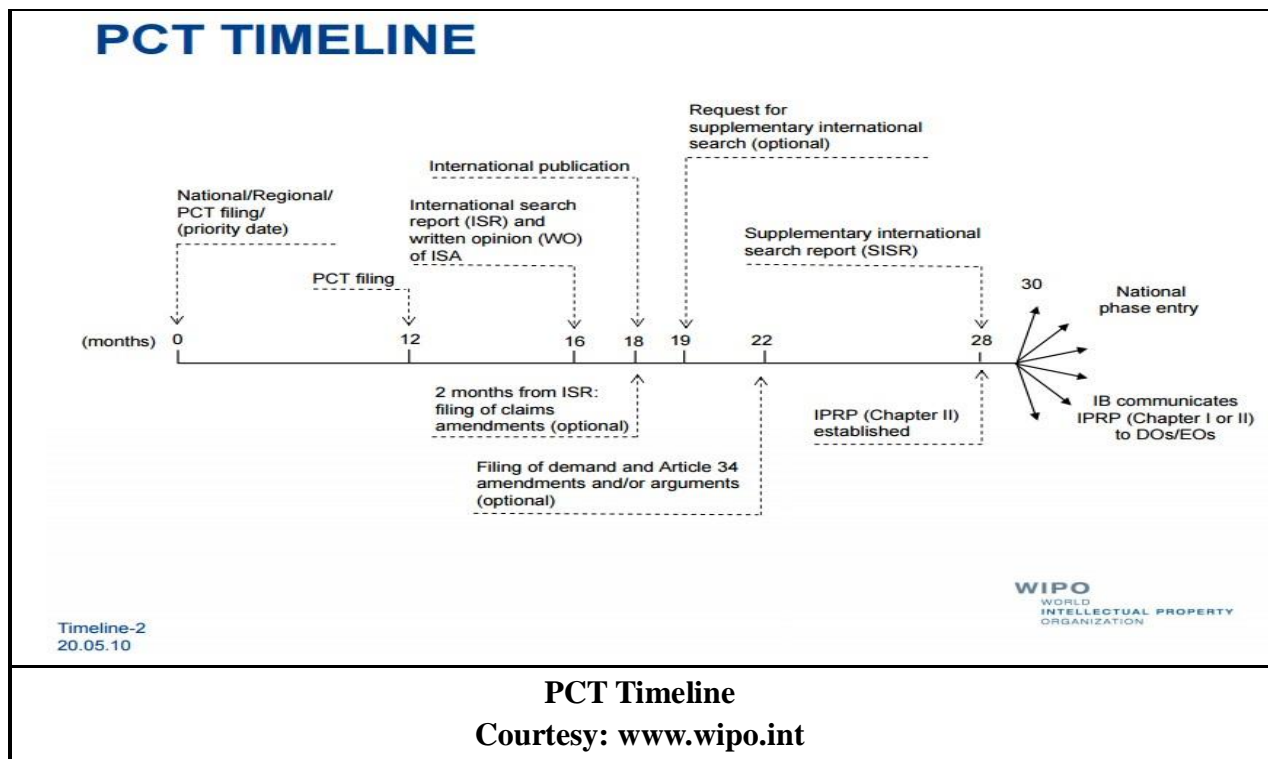
A Patent Cooperation Treaty (PCT) application is an international application governed by World Intellectual Property Organization (WIPO), Geneva, and can be validated in 148 countries as member states. The PCT is an international filing system for patents in which the applicant files in the receiving office in a country and gains an early priority date in all the designated countries without affecting the priority date. This is a simple and economical procedure which enables patent protection for the inventions corresponding to a single priority date in many countries. Indian Patent office is a receiving office for international applications by nationals or residents of India. A PCT application shall be filed with the appropriate designated office in triplicate for applications filed in the head office (WIPO, Geneva) and quadruplicate for branch offices, either in English or in Hindi language.

Q23. What is the significance of priority in a PCT application?

A patent starts conferring the associated rights from the date of filing of the patent application. After filing a PCT application when a national phase patent application is filed, the priority date shall be the date of filing of the foreign or PCT application. Similarly, if an application is divided into two applications, the priority date shall be the date of filing of the parent application.

Q24. What is a PCT-National Phase Application?

According to the Patent Cooperation Treaty, an international application enters national phase, in the designated countries within 31 months (30 months for some members) from the priority date. The designated countries then prosecute the applications in accordance with the relevant laws. Indian Patent office prefers signed Form 1A with the national phase application. It is not mandatory for the applicant to submit the documents while entering the national phase for filing the application in the designated or elected member countries, as it is obligatory on the part of WIPO to send those things to the designated offices. However, submission of all necessary documents is preferred for convenience and faster processing of the application, as the designated office may ask for other documents if necessary.



Q25. Which is the appropriate office in India for submission of PCT applications?

PCT application can be filed in any of the Indian Patent Office located at New Delhi, Chennai, Mumbai and Kolkata (Head Office).

Q26. What is an application for Patent of Addition?

An application for patent of addition shall be made at the Indian Patent office if an inventor comes up with an improvement or modification of the invention described or disclosed in main application which should have been already filed or granted in India.

A patent of addition allows an applicant to protect that modification or advancement in an invention but the Complete Specification of that application shall include specific reference to the number of main patent or the application for the main patent as the case maybe, and a definite statement that the invention comprises an improvement in, or a modification of the invention claimed in the specification of the main patent granted or applied for. A Patent of Addition shall be granted only after the grant of the main patent. However, a Patent of Addition application gets the same priority date as the main patent application as also date of the Patent of addition as the main patent unless it is filed as a independent application.

Q27. What is a Divisional application?

In cases where the Controller of Patents identifies an application as lacking the 'Unity of Invention' i.e. the claims of a complete specification relate to more than one invention, an applicant at any time before the grant of a patent may be asked to divide the application and file further application(s) in respect of invention(s) disclosed in the provisional or complete specification already filed. This type of application divided out of the parent one is called divisional application.

Examination of a divisional application and the original parent application are always done simultaneously. The priority date for all the divisional application will be same as that claimed by the parent application. It is to be emphasized that the complete specification of the divisional application should not include any matter not in substance disclosed in the complete specification of the first application and the reference of parent application should be made in the body of the specification.

Q28. What is a Start Up application?

In accordance with the patent rules Amended in 2016, a "startup" is defined as a new company/LLP/a registered Partnership firm which has been found not more than 5 years ago, does not have a turnover of more than INR 25 crores in any financial year, in the last 5 years" time, and is working towards innovation, development, deployment or commercialization of new products, processes or services driven by technology or intellectual property. A patent application generated through a Start up is called a Start Up application. Flexible Patent rules for have been amended to facilitate start ups for IP protection by giving various benefits.

Q29. What is opposition under the Indian Patents Act 1970?

The Indian Patents Act, 1970 provides for pre grant and post grant opposition. Pre-grant opposition can be filed after the publication of patent application and before the grant of patent by any person with a statement and evidence in support of the opposition. On the other hand, post-grant opposition can be filed within one year of the grant of the patent.

There is a set legal procedure for the hearing of both pre and post grant oppositions laid down under the Indian Patent Act 1970 and rules. An opposition board is constituted for each of the opposition notification accepted by the Controller for the post grant opposition proceedings. Opposition in both cases will be allowed on the grounds specified in the Indian Patent Act.

Q30. What are the grounds for opposition?

According to the Indian Patent Act 1970 and rules, pre-grant and post-grant opposition can be filed only on the following grounds:

- (i) Claimed invention or its part wrongfully obtained.
- (ii) Claimed invention is published in any patent or any other document before the priority date.
- (iii) Claimed invention was publicly known or publicly used before the priority date.

- (iv) Claimed invention is obvious and clearly does not involve any inventive step, having regards to the matter published or used (in India) before the priority date.
- (v) Claimed invention is not the invention within the meanings of the Patent Act or is not patentable under the Patent Act.
- (vi) The complete specification does not sufficiently and clearly describe the invention or the method by which it is to be performed.
- (vii) The applicant has failed to disclose to the Controller the information regarding foreign applications filed for the same invention by him or has furnished the information which in any material particular was false to his knowledge.
- (viii) In case of a Convention application, if the application is not filed before the expiry of 12 months from the date first application for the protection for the invention made in convention country.
- (ix) The complete specification does not disclose or wrongly mentioned the source and geographical origin of biological material used in the invention.
- (x) Claimed invention was anticipated having regard to the knowledge, oral or otherwise available within any local or indigenous community in India or elsewhere.

Q31. What is the publication and examination of patent application?

Publication: The publication of a patent application is different from the publication in a learned journal printed or web-based. In context of patent application, the patent office published the applications after 18 months of filing of the patent application or from the date of priority (whichever is earlier) in the official gazette of the Indian Patent office for inspection by public and checking for objections. All the patent applications except the applications prejudicial to the defense of India or abandoned due to non-filing of complete specification within the prescribed time-limit after provisional or withdrawal of the application are published in the official Gazette. The publication will include the particulars of the date of the application, application number, name and address of the applicant along with the abstract. No application for patent shall be opened for public inspection before publication. After the date of publication of the application, as stated above, the complete specification along with provisional and drawing, if any, and abstract may be inspected at the appropriate office by making a written request to the Controller in the prescribed manner.

Examination: A request for examination (RFE) in form - 19 is to be filed simultaneously with the patent filing or within 48 months from the date of filing or earliest priority date; in case the RFE is not filed the corresponding application will not be examined and will be deemed as withdrawn. A request for examination may be normal or express.

After the examination, a patent may proceed for grant or a First Examination Report (FER). In the FER, objections/requirements may be communicated to the applicant or his agent according to the address for service.

Reply to the FER is to be submitted with needed amendments in complete specification within a period of 06 months from the date of First Examination Report (FER). No further extension of time is available in this regard.

If all the objections are not complied within the period of six months, the application will be deemed to have been abandoned. When the application is in order for acceptance, it is notified in the Gazette of India.

Q32. Can a patent application be withdrawn?

The applicant may, at any time after filing the application but before the grant of a patent, withdraw the application by making a request in writing and by paying the prescribed fee. However, if the applicant makes a request for withdrawal within 15 months from the date of filing or priority of the application, whichever is earlier, the application will not be published. The application withdrawn after the date of publication cannot be re-filed as it is already laid open for public inspection. However, application withdrawn before the publication can be re-filed provided it is not disclosed otherwise.

Q33. How is a patent granted?

If the application is not opposed or the opposition is decided in favor of the applicant or is not refused, and if the application satisfies all the requirements of the patent act, the patent is granted or sealed on making a request in Form 9 along with sealing fee within 6 months from the date of notification of acceptance of the complete specification in the Gazette of India at the appropriate office where the application was filed. However, it is extendable by three months. If the sealing fee is not paid within the prescribed period, it will be treated as “NO PATENT”. There is no provision in the Indian Patent Act to revive the said patent.