

INTELLECTUAL PROPERTY RIGHTS AND INDIAN LEGAL FRAMEWORK

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INTRODUCTION

Agreement Trade Related Intellectual Property Rights (TRIPs) to which India is a signatory is an integral part of WTO and it has an enormous impact in Indian legal framework on these issues. In the last two decades, India has enacted various laws and amended the existing laws in compliance to TRIPs agreement. Further, India has also established a comprehensive statutory, administrative and judicial mechanism in tune with the provisions of TRIPs agreement to protect the Intellectual Property. The importance of Intellectual property is recognized as a policy instrument for wide range of socio-economic and technological development. The following laws are formulated or amended to fully comply with the TRIPs framework.

1. Indian Patent Act 1970 (amended 1999,2002 and 2005)
2. Indian Copy Right Act 1957 (amended in 1995)
3. Indian Geographical Indications of Goods (Registration and Protection) Act, 1999
4. Indian Trademarks Act 1999
5. Indian Designs Act 2000
6. Indian Information Technology Act 2000
7. Indian Semi-Conductor – Integrated Circuits & Layout Designs Act 2000
8. Indian Plant Varieties and Farmers Rights Act 2001
9. Indian Biological Diversity Act 2002
10. Indian Competition Act 2002

These legislations formed as part of the India Government resolve to protect Intellectual Property Rights of the citizens. They have been enacted or reframed with amendments in tune with the provisions of TRIPs agreement signed in WTO.

INDIAN PATENTS ACT 1970 (AMENDED 1999. 2002 AND 2005)

The Indian Patents Act 1970 is a landmark Act in the history of Industrial Development and forms the basis for transfer of technology. The Act devotes equal attention towards the Industry, the scientists the consumers and as such the nation as a whole. The Indian Patents Act 1970 has certain important provisions, among them.

1. Section 5(A)(B) envisages that "only methods or processes of manufacture claimed for substances intended for use or capable of being used as food or as medicine by chemical processes including alloys, optical glass, semi conductor and inter metallic compounds, would be patentable and that as such no patent shall be granted in respect of claims for the substances themselves.¹

2. The Indian Patent Act 1970 provides for a much shorter duration of rights protection i.e., 5 years to 14 years. The Act says, in respect of invention, claiming process or method of manufacture of a substance intended for use or capable of being used as food or as a medicine or drug be 5 years from the date of seating of the patent or 7 years from the date of the Patent which ever period is shorter. In respect of any other invention, be 14 years from the date of the Patent.²
3. The Indian Patent Law allowed compulsory licensing within specific limits. Article 90 of the law indicates that when reasonable requirement of the Public demand is to adequately met, the Government can grant compulsory licensing for other firms to manufacture than the patented firm.³

However, the Indian Patents Act amended in 1999, 2002 and 2005 in accordance with WTO obligations had brought major changes in Patent frame work in India. These include, extending the duration of the Patent from 5 years and 14 years to a 20 year uniform duration and a narrower frame work for compulsory licensing. TRIPs agreement imposed a significant change to the Indian Patent Law by making the availability of product patents.⁴

The Union Government in India has promulgated an ordinance in December 2004 which was later accepted by Indian Parliament to make it a Law. As a result of this, India has to grant product Patents developed after January 1, 2005. The "mail box" provision of TRIPs also requires the Government to grant Patents which were filed between 1995 and 2005.⁵

However, some of the leading economists like T.N. Srinivasan and others cautioned the Indian Government in granting patents to these mail box applications as they lack novelty or inventive nature. The economist sought to explain that multinationals may cover the idea of combining two drugs in a single tablet and claim patent. If granted, such Patents could be used to extend the life of existing Plants indefinitely. This is known as every greening Patent. Further, these Patents are claimed one after the other by combining two drugs which are already granted Patents in a never ending process.⁶

These economists suggested that 'Indian Parliament can prevent these problems by allowing Patents only for new chemical entities, and have also suggested that India should retain maximum flexibilities available in Articles 30 & 31 relating to compulsory licensing. These economists have counseled the Indian Parliament to retain the provisions of Indian Patents Act 1970 relating to "pre grant opposition" or the right of third parties in seeking to challenge a patent application before the patent was granted. In this context the New York Times newspaper in its editorial on March 5, 2005 stated that "Seldom has India's Parliament considered anything of such global import. If, Parliament can preserve India's ability to provide generic (medicines), it will make the difference between life and death for millions of people at home and abroad."⁷

The second amendment to Indian Patents Act 1970 undertaken in 2002 clearly extends the duration of patents from the 5-14 years terms to 20 years term uniformly. However, this amendment retains the Right of issuing compulsory licenses in case of "Extreme Urgency" or "national emergency" on health grounds. This has worried the multinationals as they fear the

compulsory licensing would bring 'Licensing Raj' and abuse their advantages of Intellectual Property Rights.⁸

The Indian Patents Act 1970 is amended thrice in March 1999, June 2002 and March 2005. The Indian Parliament has deliberated at full length on passing these amendments. The Indian Defence Minister Pranab Mukherjee and Commerce Minister Kamal Nath made a vehement appeal for the passage of the bill in 2005 with wide ranging discussions among opposition parties. They have also clarified that these amendments to Indian Patents Act 1970 were undertaken as a part of International obligation of accepting TRIPs regime of WTO.⁹

INDIAN COPY RIGHTS ACT 1957 (AMENDED IN 1994 AND 1999)

Copy right guarantees certain minimum safeguards to the Rights of authors for print or published works, Rights of artists for performers rights, and creative digital rights such as cinematographic rights on films and rights on computer database programs like computer tables, programs compilations and so on. Broadly these rights can be divided into literary works artistic works and creative digital works.

In India, these are four organizations registered for protection of copy rights. They are, Indian Reprographic Rights Organization (IPRO), for the protections of rights on Books, literature and artistic photocopy material. Secondly, Indian performing Rights Society Limited, (IPRS) for the protection on Musical Works, Thirdly Society for Copy Right regulation of Indian Producers of Films and Television (SCRIPT) and lastly the society for Phonographic Performance limited (PPL). These Societies are working as official organizations for the protection of copy rights.

The first Copy Rights Act in India was formulated in 1911 and again with certain modifications Indian Copy Rights Act of 1957 was made. This Act was made by respecting International Conventions such as Berne Convention (1908) and Rome Convention (1961).

Section 13(1) of Copy Right Act 1957 defined copy right as the works that subsist throughout India in original form of literary, dramatic, musical and artistic work, cinematograph films and sound recording. Section 52 of Indian Copy Rights Act said that certain acts not to be infringement of copy right. Hence, without the permission of copy right holders the work can be used for criticism and comment, parody and satire, scholarship and research, news reporting and teaching.

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Following the TRIPs Agreement of World Trade Organization (WTO), Indian Copy Rights Act is amended in 1994 and 1999. The Copy Right (Amendment) Act of 1994 extended the performers rights to include any visual or acoustic presentation made live by performer. The definition of performer has been included in 1994 with section 2 (q) of Copy Rights Act to the works of an Actor, Singer, Musician, Dancer, Acrobat, Juggler, Conjuror, Snake Charmer, a person delivering a lecture or any other person who makes a performance. The rights of the copy right holders include, Right to Reproduction. Right of Distribution, Right of Rental, Right of Remuneration, Right of Identity, Right of Broadcasting and Communication, Right of Integrity etc., The World Intellectual Property Rights Organization (WIPO) periodically defines the scope of Copy Rights

and in the year 1996 it has conducted Diplomatic Conference on Copy Rights and Neighboring Rights. It has also concluded Treaties such as WIPO Performances and Phonograms Treaty (WPPT) and WIP Copy Right Treaty (WCT).

With regard to tenure of copy right, the Indian Copy Rights Act is amended in 1994 and 1999 (in accordance with the provisions of TRIPs Agreement) and stipulated 60 years for literary works and artistic works (which lasts for a life time of a Right holder). For performers Rights its tenure is 50 years¹¹.

INDIAN GEOGRAPHICAL INDICATIONS OF GOODS (REGISTRATION AND PROTECTION) ACT 1999

The products that are identified as typical to a particular geographical region are registered as Geographical Indications. This includes the famous Tirupati Laddu, Kakinada Kaaza, Nagpur Oranges, Basmati Rice, Kolhapuri Chappals, Banarasi Saree, Darjeeling Tea, Mysore Silk etc. They originate from place, with a given quality of product and reputation.

The goods associated with Geographical Indications many emanate from agriculture or Non agricultural sectors. While Basmati Rice, Nagpur Oranges, Alphonso Mango and others may be from agriculture sector, the goods such as Kolhapuri Chappals, Kashmiri Carpets, Chinese clay posts, Scotch whisky and so on are non agricultural products. The TRIPs agreement recognizes Geographical Indications as a unique form of Intellectual Property and WTO agreement insists member Countries to provide protection with legal frame work for these goods and products.

Honouring the obligations of TRIPs agreement of WTO, India has enacted the Geographical Indications of Goods (Registration and Protection) Act of 1999. Section 2(1)(e) and (8) define Geographical Indications as "Indications which identifies such goods as agricultural goods, natural goods or manufactured goods as originating or manufactured in the territory of a Country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin and in case where such goods are manufactured goods, one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be¹².

India had no legislation before 1999 to protect the Geographical Indications. But certain Indications were protected under Trade Marks laws. With the formulation of Indian Geographical Indications (Protection and Registration) Act 1999, India has fulfilled the WTO obligations of TRIPs regime. The Controller General of Patents, Designs and Trade Marks shall also act as Registrar of Geographical Indications. With an executive order, Geographical Indications of Goods (Registration and Protection) Rules 2002 are also framed. This Act and rules prevent unauthorized use of registered Geographical Indications by third parties¹³.

INDIAN TRADE MARKS ACT 1999

A Trade Mark is a word, phrase, symbol or design or combination of words, phrases, symbols and designs used in the course of trade which identifies and distinguishes the source of goods or services from those of others. Trade Marks are useful to indicate, identity, distinguish, source of origin and quality of goods. The Trade Marks are useful to advertise goods.

The Trade Marks Act of 1940 was the first legislation to grant statutory recognition to Trade Marks and introduced procedures for registration. Almost two decades later, the Indian trade and merchandise Act 1958 replace the above Act. Again the Government of India formulated the Indian Trade Marks Act 1999 on repealing the old Trade and Merchandised Marks Act of 1958. The new Act brought into force statutory frame work with respected to Trade Marks in India. in line with emerging worldwide trends as well as with Indians obligation under the agreement on Trade Related aspects of Intellectual Property Rights (TRIPs) of World Trade Organization (WTO).¹⁴

The new Trade Marks Act 1999 has expanded the scope of Trade Mark with the inclusion of shape of the goods and colour combination in the list of Marks which can be registered as Trade Marks. So, under the expansion a product package or product design includes shape and colour combination and these may be registered as Trade Marks¹⁵.

The Indian Trade Marks Act of 1999 has also been applied to the problems related to domain names on web sites and issues of cyber piracy. This is known as cyber squatting which refers to individual who registered domain names identical to well known marks in an attempt to resell at significant profit. Cyber pirates are those who register the same or confusingly similar domain name in an attempt to lure cyber traffic of other domains¹⁶. Section 103, 104 and 134 of Indian Trade Marks Act 1999 provides remedies against infringement of cyber space and Trade Marks.

The Government of India has also indicated in 2005 that it has decided in principle to join Madrid system for international for registration of Trade Marks and service marks. It has taken 6 years for India to think a step that should have logically followed the momentous decision it took in 1998 to join Paris Convention on the protection of Industrial Property which lays down minimum legal standards for Intellectual Property Rights (IPRs). The accession to the convention followed a realization that the country was irreversibly moving towards the grant of product Patents for drugs, foods and Agro chemicals as an obligation under the Trade related Intellectual Property Rights (TRIPs) regime of WTO¹⁷. The Indian Trade Marks Act 1999 also provides for registration of service marks.

INDIAN INFORMATION TECHNOLOGY ACT 2000

The Government of India has enacted Indian Information Technology Act (2000) and Personal Data Protection Act (2006) for the protection of digital privacy of the citizens in general and Intellectual Property Rights in Electronic sector in particular. India has been experiencing an unprecedented growth in software industry with a strong Business Process Outsourcing (BPO) sector; As a result, product firms are becoming IP Factories and leverage the increasing

softwarisation of hardware. According to Rajdeep Saharwat, Vice President, National Association of Software and Service Companies (NASSCOM), imaging technology creates Intellectual Property Rights in healthcare, clinical research, engineering design and other research¹⁸. Hence, the need for stringent laws for data protection and Intellectual Property Rights is vehemently felt.

In the Agreement on TRIPs, Article 10 reads that member countries should protect computer programs (whether in source or object code) as literary works. Compilations of data, according to Article 10(2) constitute intellectual creations and shall be protected. Such protection shall be without prejudice to any copy right subsisting in the data or material itself.

Accordingly, the Indian Information Technology Act 2000 is enacted and amended in 2008 to honour the obligations of the TRIPs agreement. In fact, Computer Programs qualify as expressions and can be protected under the Copy Right Laws. However, in certain sectors, the need is felt for getting a Patent Protection for software such as sequence, structure and functional elements. According to Section 72 of IT Act, penalty can be imposed for breach of confidentiality and privacy. This section provides that any person who secures access to any electronic record, book, register, correspondence, information, document or any other material without the consent of the person concerned shall be punished with imprisonment and penalty.

INDIAN DESIGNS ACT 2000

A product design refers to the visual appeal of the article with aesthetic or outward appearance of a product. Designs in general and industrial designs in particular help companies to differentiate their products from those of competitors and enhance the brand image of their products.

During the Colonial era, the Patents and Designs Protection Act 1872 was enacted to grant exclusive rights on Designs. After that, the Patents and Designs Act 1911 was enacted to protect designs. In the post-independence era, the Patents Act (1970) constituted provisions for protection of Designs. The Indian Designs Act 2000 is enacted replacing the earlier Acts and is formulated in compliance with the provisions of TRIPs agreement of WTO.

The Designs Act of 2000 defines the word design in section 2(d) as "the features of Shape, Configuration, Pattern, Ornament or Composition of lines or colours applied to any article whether in two dimensional or three dimensional or in both forms, by any industrial process of means, whether manual, mechanical or chemical, separate or combined, which in the finished article appeal to and are judged solely by the eye¹⁹.

The Indian Designs Act 2000 is changed in compliance with the provisions of TRIPs agreement of WTO. Firstly, novelty is to be decided on global level but it was to be decided only at national level first. Secondly, the present Act provides classification system for designed goods based on Locarno classification system. Thirdly, the period of copy right design is ten years from the date of registration and can be extended to a second period of five years, totaling 15 years²⁰.

INDIAN SEMI SEMICONDUCTOR- INTEGRATED CIRCUITS & LAYOUT DESIGNS ACT 2000

The Semi Conductor Integrated Circuits and Layout Designs Act is enacted in 2000 to provide protection to innovative matters connected to its invention. According to this Act, the term layout Design means "a layout of transistors and other circuitary elements which included lead wires connecting such elements". Again, the Act also defined Semi-Conductor Integrated Circuit, as "a product having transistors and other circuitry elements which are inseparably formed on a semiconductor material or an insulating material or inside the semiconductor material and designed to perform an electronic function."²¹

This Act provides protection for the innovative layout designs for a period of 10 years from the date of filing an application for registration or from the date of first commercial exploitation anywhere in India. Layout designs, also known as Topographies, are based on utility Model of Intellectual Property Rights. Sometimes these innovations are in the nature of minor improvements, small improvements or incremental inventions over the existing ones. Hence, the duration of protection under the Act lapses after 15 years. The Indian Act on Topographies is based on provisions mentioned in the Agreement on Trade Related Intellectual Property Rights of WTO. The Act is in accordance with section 6 of TRIPs Agreement in Articles 35 to 38 of WTO²². The Indian Act and TRIPs provisions on Semi Conductors and Integrated Circuits (Topographies) are based on the provisions of Treaty on Intellectual property in respect of Integrated Circuits (IPIC) of 1989 arranged by WIPO.

INDIAN PLANT VARIETIES AND FARMERS RIGHTS ACT 2001

This Act is enacted to Protect Plant Varieties, rights of farmers and right of plant breeders and encourages the development of new varieties, to implement the provisions of this Act, an administrative structure titled, "Protection of Plant Varieties and Farmers Rights Authority" is constituted. This Authority grants exclusive rights to the breeders, farmers and Researchers who have been breeding, evolving or developing any plant varieties. The Indian Government has also framed PPV & FR Rules in 2003 and PPV & FR (Recognition and Reward) Rules 2012 for recognizing and rewarding farmers, who evolve new plant varieties.

Under this Act, a farmer who has been breeding or developing a new variety shall be entitled for Registration and other protection. Farmers who breed rare and innovative varieties are entitled for Plant Genome Savior Community Award, Plant Genome Savior Farmer Reward and Plant Genome Savior Farmer Recognition under the Gene Fund. A farmer shall be entitled to have certain rights such as to save, use, sow, resow exchange, share or sell his farm produce including the seed variety protected under this Act.

The Indian Patents Act 1970 excluded from patentability of technologies relating to atomic energy and inventions relating to agriculture and horticulture products or methods. However, the plant varieties and Farmers Rights Act provides for patenting plant varieties. This Act and its provisions are in accordance with the provisions of TRIPs agreement of WTO. Some of the provisions in this

Act are drawn from UPOV (International Union for the protection of New Varieties of Plants) 1978 and 1991 versions.²³

INDIAN BIOLOGICAL DIVERSITY ACT 2002

The Biological Diversity Act is enacted in 2002, and Biological Diversity Rules are notified in 2004 by the Government of India to conserve, sustainably use, and fairly and equitably share the benefits arising out of the use of India's biological resources and associated knowledge. This Act has established the National Biodiversity Authority (NBA) under the Ministry of Environment and Forests for examining and approving the applications made for obtaining any Intellectual Property Right (IPR), in or out side India, for any invention based on any research or information on Indian biological resources. Further, the approval of NBA is not required when Indian biological resources are used for conventional breeding or Traditional Practices in Agriculture, Horticulture, Poultry, Dairy farming, Animal husbandry or bee keeping. Prior approval of the NBA should be obtained whenever foreign nationals, foreign entities, Non Resident Indians (NRIs), Indian entities having non Indian participation in their share capital or management, access and use Indian biological resources and knowledge associated thereto, for research or for bio survey and bio-utilization or for commercial utilization such as drugs, industrial enzymes, food flavors, fragrance, cosmetics, emulsifiers, oleoresins, colours, extracts and genes.²⁴

By respecting the provisions of international convention on biodiversity (1993) and TRIPs agreement of WTO, the Indian government has formulated this Act. Article 16 of the Convention on Biodiversity states that "In the case of technology, subject to patents and other intellectual property rights such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of Intellectual Property Rights". The convention also appeals "the contracting parties, recognizing that patents and other Intellectual Property Rights may have an influence on the implementation on the present Convention, shall cooperate in this regard subject respect to national legislation and International Law in order to ensure that such rights are supportive of and do not run counter to the objectives of this Convention."²⁵

Article 27 (2), 27 (3) of TRIPs Agreement provides for excluding Patents within the territory of any member country to avoid serious prejudice to environment.²⁶

There has been a lot criticism against the Act as its regulates the Industry and Research in the name Biological conservation. According to Vivek Singhal president of All India Biotech Associations, it stops the growth of Industry. A nascent biotech industry needs foreign collaborative research for growth. According to provisions of this Act, transfer of results of any research relating biological resources require prior approval of NBA.²⁷

INDIAN COMPETITION ACT (2002)

This Act is formulated to foster and maintain competition in the Indian market to sub serve consumer while protecting the freedom of economic action of various market participants. It also seeks to prevent practices which effect competition and to establish the Competition Commission

of India (CCI) which is vested with powers to implement the Indian competition Act and also play the role of competition advocacy. The Indian competition law is formulated on the basis of the report of Raghavan committee which suggested several issues such as, contours of competition policy, agreement among enterprises, and control over abuse of dominance, acquisitions and mergers. Accordingly the Competition Commission of India is given wide mandate.²⁸

The Indian Competition Act is enacted in consonance with section 8 of Article 40(1), (2) and (3) of the TRIPs Agreement of WTO. Art 40 (1) states that some licensing practices or conditions pertaining to Intellectual Property Rights (IPRs) that restrain competition may have adverse effect on trade and may impede transfer and dissemination of technology. Article 40(2) authorizes the member countries to formulate legislations on competition aspects to prevent abuse of Intellectual Property Rights (IPRs).²⁹

CONCLUSION

The agreement on Trade related aspects of Intellectual Property Rights (TRIPs) under World Trade Organization has systematically categorized Intellectual Property into seven concrete forms. They are copy rights and related rights, trade marks, geographical indications, Industrial Designs, Patents, Layout Designs and Topographies of Integrated Circuits and protection of undisclosed information. These forms of intellectual property have brought far reaching changes in the Indian legal system as a part of their protection with India being a member of TRIPs Agreement of WTO. The Government of India initiated various measures and Indian Parliament has approved many legislations in this direction. During the course of these initiatives, certain laws are amended, certain laws are repealed or replaced with new laws and certain laws are enacted afresh. These laws are included the Indian Patents amendment Acts of 1999, 2002 and 2005, the Indian Copy Rights amendment act of 1995, Indian Geographical Indications of goods (registration and protection) Act 1999, Indian Trade Marks Act 1999, Indian Designs Act 2000, Indian Information Technology Act 2000, Indian Semi-Conductor, Integrated Circuits and Lay out Designs Act 2000, Indian Plant Varieties and Farmers Right Act 2001, Indian Biological Diversity Act 2002 and Indian Competition Act 2002. By formulating these legislations a concrete legal frame work is established for the protection of Intellectual Property Rights in India. These legislations are claimed to have made a balance between innovative nature of Intellectual Property and Public utility of these inventions.

REFERENCES

1. Section 2(T)(f) of Indian Patents Act 1970.
2. Section 2(H) of Indian Patents Act 1970.
3. Section 90(a)(b)(c)(d)(e) facilitates the Government to issue compulsory licenses to firms other than Patented firms under certain conditions.
4. Philip Gullet, "Access to Drugs and the Patents Bill". The Hindu, June 30, 2002.
5. Article 70.8 of TRIPs agreement provides for Mail box provision in which the government is required to consider product Patent applications filed between 1995-2005. There were around 7000 applications in Indian Mailbox.

6. T.N. Srinivasan, Frederick M Abbott and Amy Kapczynski "The draft Patent Law" The Hindu. 12th March, 2005.
7. Editorial New York Times, March 5, 2005 on Indian Patents Amendment Bill.
8. Patents legislation worries MNCs, The Hindu, and July 24,2002
9. The Hindu, March 22,2005 three related news items on patents bill in page 11 with titles (i) Centre accepts all but two changes in Patents bill (ii) B/P may go along with consensus on Patents Bill (iii) Parties must not change positions because they change sides.
10. Indian copyright act 1957, section 13(1) and section 52.
11. Dr. P.K. Pandey, "Intellectual Property Law". (2012), APH Publishing Corporation, New Delhi. Pp.46 to 68.
12. Indian Geographical Indications of Goods (Registration and Protection) Act of 1999, section 2(1) (e) and 2(1) (f).
13. Suresh Srivatsava, "Geographical Indications and Legal Framework in India", Economic and Political Weekly (EPW), 20th September, 2003. pp.4022 – 4033, Bombay.
14. Lokganathan. F.T., "Intellectual Property Rights (IPRs) TRIPs Agreement and Indian Laws". New Century Publications (2012) New Delhi, pp.86-87.
15. Ranjit Kumar, Gulla, "The Concept of Trade dress Protection: its scope and development" The ICFAI Journal of IPR, New Delhi, May 2006.
16. Cyber squatting means registering, selling or using a domain name with the intent of profiting from the goodwill of someone else's domain or trade mark. Salecm Akthar and Tabassum Choudhury "Protection of Trade Mark and Domain name in India". In P.K. Pandey's "Intellectual Property Law" (2012), APH Publishing, New Delhi. Page No 146.
17. The Hindu, Editorial, "Joining the Madrid System." April 7, 2005, Hyderabad
18. Rajdeep Sahrawat, "Software products: The perfect storm - Product firms can become IP factories and leverage the increasing softwarisation of hard ware". The Hindu, July 27,2009, Hyderabad Business Review. Pp.15.
19. Indian Designs Act 2000, Section 2(d) and third schedule of Indian Design Rules 2001.
20. Pandey P.K., "Protection of Industrial Design in India" in Intellectual Property Law, Op. cit, pages 121-141.
21. Section 3(a) and 3(b) of Indian Semiconductor: Integrated Circuits and Layout Designs act 2000.
22. Keayla.B.K. (1999), "Patent Regime: Indian experience and options available": National Working Group on Patent Laws Centre for Study of GATT Issues, New Delhi.
23. Mathur. A (2003), "Who owns Traditional knowledge' Economic and Political Weekly (EPW) Bombay, October, 2003, pp.18-34.
24. Secretary, National Biodiversity Authority, Chennai Public Advertisement printed and published in The Hindu, July 28, 2013 page.16.
25. Ashish Kothari (1997), "Understanding Biodiversity: Life, Sustainability and Equity". Orient Longman, New Delhi. Pp 124 -125.
26. Article 27(2) and 27(3) of The TRIPs Agreement of: WTO.
27. Jayanta Ghosh, "No Surprises, tones of diversity in biodiversity bill," Times of India, April 18, 2001.
28. The Hindu, "Competition Law Bill in Winter Session", November 15, 2000.

29. Article 40(1), 40(2), 40(3) and 40(4) of Section 8 of Part II in Agreement on Trade related Property Rights of WTO (1995).