

Course: 04

**INTRODUCTION TO
OER & ETHICAL USE OF
ICT IN TEACHING &
LEARNING**



Year: 2021



**Commonwealth Educational Media Centre for Asia
and
Krishna Kanta Handiqui State Open University**





INTRODUCTION TO OER & ETHICAL USE OF ICT IN TEACHING & LEARNING



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and
Krishna Kanta Handiqui State Open University**



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Course Introduction

This course on “*Introduction to OER & Ethical Use of ICT in Teaching & Learning*” has been designed in such a way that it can be used as a self-learning material for obtaining basic knowledge and understanding of various components (hardware as well as software) of a computer system. All the modules presented in the course are illustrated with suitable examples wherever required, in addition to providing links of video tutorial/s and also other OER links for further learning at appropriate places. These enable the learners to understand the concepts easily thereby leading to effective self-learning.

This course material consists of 2 modules.

Module 1 gives an idea on the concept of Open Educational Resources or OER. The differences amongst OER, SLM and e-learning materials are described here. The module also explains about the creative commons and its licensing system.

Module 2 explains in details how to use various software, resources available both offline and online in a safe, secure and ethical way. The module discusses in details about intellectual property rights, patent and copyrights, describes about geographical indication rights, trademark and trade secrets in addition to highlighting on the concept of plagiarism.

Introductory Video of Certificate on Application of ICT in School Education	Video link : https://www.youtube.com/watch?v=2MB2twPqsBk	Scan with QR Code 
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Module I:
**EXPLORING EDUCATIONAL RESOURCES,
CONCEPT OF OER, CREATIVE COMMON**



STRUCTURE

- 1.1 Learning Objectives
- 1.2 Introduction
- 1.3 Exploring Educational Resources
- 1.4 Introduction to Open Education Resource
- 1.5 Creative Commons
- 1.6 Let Us Sum Up

1.1 LEARNING OBJECTIVES

After going through this module, you will be able to -

- describe the concept of OER
- differentiate among OER, SLM and e-learning material
- explain about creative commons and its licensing system

1.2 INTRODUCTION

This module is all about a very important addition in the field of education. Here we shall introduce you to one of the most popular terminology, i.e. OER (Open Educational Resources). We shall firstly introduce you to the concept of OER and thereafter move on to describe about the Creative Common Licensing system.

1.3 EXPLORING EDUCATIONAL RESOURCES

There are numerous numbers of educational resources available on the web and standalone computer starting from worksheet to modern technology like Artificial Intelligence. These types of resources help teachers to manage their lessons efficiently and engage learners in the learning process. Not only this, for each subject we can get different types of applications in web, which we can easily make use, e.g. for Maths, we can use Mathsphere free resources and for English, we can engage primary students via Learn English, Britlit, etc. For Science, numerous numbers of applications are available in the web, e.g. paint, 3D paper craft, Adobe Photoshop, etc. We simply need to explore and we will get

our software in minutes from our main resource tool, that is internet. We basically need to search for software. For that we can use any search engine such as Google, Bing, etc. These search Engine will give one or many links. By clicking and reading those link websites, we can download and install our educational resources or we can directly use our resources online. Again, resources are not limited to software only, it can be any webpage having information in readable format, e.g. Wikipedia, News website, online courses, etc. These are also educational resources. One learner can write some educational information in his/her webpage or prepare some applications as well, eventually it will become an Education Resource for other learners. So, this way educational resources in web is exponentially increasing, which in one way enhance the education system of this world.

<p style="text-align: center;">Exploring Educational Resources, Concept of OER, Creative Commons Part-I</p>	<p style="text-align: center;">Video link : https://youtu.be/9IE_4wAVFOs</p>	<p style="text-align: center;">Scan with QR Code</p> 
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1.4 INTRODUCTION TO OER

OER stands for Open Educational Resources which are freely available learning material in any form. When we say in any form, it means OER can be available in the form of print media, video, audio, eBook, website, blogs or the most popular one, that is social media. Only condition is that it should enhance one's knowledge in true sense. One more quarry may come to your mind that who can create OER. Well is it simply 'anyone'; anyone who wants to share his/her knowledge with the rest of the world can create OER. provided the knowledge he/she wants to share should not be misleading, then only it should be termed as OER. It must be available freely for at least education purpose. In summary, we can say that OER refers to educational materials that can be used, modified and shared at free of cost by anyone. Students and Educators both will get benefitted if they use OER.

Now, there arises one common confusion to everyone's mind whether OER is same as Self Learning Material? We can say answer is both 'yes' and 'no'. In most cases the learning material that are provided in distance education system are not freely available for all. They are only distributed to the learners who opt for a particular course in distance education system. If any institution provides the self-learning material free to all online or offline than that SLM (self learning material) will be termed as OER.


Apart from all above you must also understand that e-learning and OER is not same. As most of us know that e-learning is a kind of online learning programme, where a learner can enrol himself to a particular programme online and he get all his counselling, learning material and evaluation process online. So similar to SLM e-learning material can be OER only if they are made freely accessible to all.

OER stands for Open Educational Resources which are mainly contents such as specially designed online materials for educational purposes. Open learning is different from OER, which includes educational services as well. Open learning relies on open educational resources (OER), online textbooks, video recorded lectures, YouTube videos and other media designed for mainly study and that are freely accessible and openly licensed. OER also includes PowerPoint slides or pdf files of lecture notes. In order to be an OER, these staff must be available freely for at least education purpose. In summary, we can say that OER refers to educational materials that can be used, modified and shared at free of cost by anyone. Students and Educators both will get benefitted if they use OER.

An open license of OER permits users to:

- **Reuse:** People are allowed to use all or part of the work for their own purposes (for example, download a document).
- **Redistribute:** People can share their work with others (for example, sharing an article with friends or colleagues).
- **Revise:** People can adapt, modify, translate, or change the work (for example, translating the language of a book).
- **Remix:** People can take two or more existing resources and combine them to create a new resource (for example, take audio lectures from one course and combine them with slides from another course to create a new derivative work);
- **Retain:** No digital rights management restrictions (DRM); the content is yours to keep, whether you're the author, an instructor using the material, or a student that is simply retaining a resource.






Now, one question should come to everybody's mind that if OER is free than to what extend it is free? Is there no restrictions or licensing system to use them? Well, this will be decided by the creator of the OER. In case of OER creative commons licensing system is used globally for the licensing purpose.


<p style="text-align: center;">Exploring Educational Resources, Concept of OER, Creative Commons Part-II</p>	<p style="text-align: center;">Video link : https://youtu.be/0i0Yig7-TS0</p>	<p style="text-align: center;">Scan with QR Code</p> 
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1.5 CREATIVE COMMONS

Creative Commons (CC) is an American non-profit organization, which allows users to avail others creative works. So, one's creative work can be viewed or modified by the any user in the world. This organization released several Creative commons Licenses which are like copyright licenses & free of charge to the public. Those licenses are based on copyright. Creative Commons Licenses are agile, low-overhead and low-cost copyright management regime, which benefits both the owners and licensees.

In this type of licensing process the creator or author can chose himself the terms and conditions of suing his creation. And for choosing and applying the license to ones OER, it not necessary to apply for license to any authority. One can visit the site <https://creativecommons.org/> and using very few user-friendly steps one can chose and use his license. Basically, one can chose his license from creative commons site from the following types-

- CC0 - it means the material is on public domain and not restricted by any laws. Anybody can republish, use and modify freely without attributing the original author.
-  : if a person chose cc-by license, it means it allows it to use in any manner but with his attribution.
-  : if one chooses this cc-by-sa license, it allows to use it with attribution and permission to share alike. derivatives from it can also be made.
-  : this cc-by-nc type license means, one can use it with attribution but no derivatives are allowed.
-  : if the author uses cc-by-nc license, it means it allows to use with attribution but for non commercial use.
-  : if a author uses this cc-by-nc-sa license, it allows to use with attribution, share alike but for non commercial use.

- : if one chose this cc-by-nc-nd license, it allows with attribution but no derivatives are allowed and for non commercial use only.

The author of an OER, can chose any one from the above, put the license in the document and publish it to the world. The last one is closer to the © license, where all rights are reserved by the author or publisher and it not freely available.

1.6 QUALITY ASSURANCE OF OER

This is one of the major concern that will come to everybody mind that how we can ensure the quality of OER or how to assess it. It is very difficult to answer as OER can be produced and published by anyone. The reader or user has to develop his own mechanism to judge the quality and authenticity. For example, few points one may consider-

- whether the author is well known in his field and have essential qualification
- whether the OER provides any biased information
- whether the OER is upto date?
- Does it address the topic at hand sufficiently to add value to the class
- whether the content is peer reviewed or contains appropriate references to verifiable resources
- OER is highly trafficked or referenced

Every institution or every publisher who will create OER, will have to take as it a social responsibility to ensure the quality and authenticity of the OER. Then only the goal of equal and wide spreading of knowledge will be possible.

1.7 LET US SUM UP

- OER stands for Open Educational Resources
- OER are freely available learning material in any form. When we say in any form, it means OER can be available in the form of print media, video, audio, eBook, website, blogs or the most popular one, that is social media.
- e-learning and OER is not same

- OER refers to educational materials that can be used, modified and shared at free of cost by anyone.
- In case of OER creative commons licensing system is used globally for the licensing purpose.
- Creative Commons (CC) is an American non-profit organization, which allows users to avail others creative works. So, one's creative work can be viewed or modified by the any user in the world.
- Every institution or every publisher who will create OER, will have to take as it a social responsibility to ensure the quality and authenticity of the OER. Then only the goal of equal and wide spreading of knowledge will be possible.

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- https://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf
- <https://en.wikipedia.org/wiki/Patent>
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- <http://www.ipindia.nic.in/faq-designs.htm>
- <https://en.wikipedia.org/wiki/Trademark>
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Module II:
SAFE, SECURE AND ETHICAL USE OF ICT



STRUCTURE

- 2.1 Learning Objectives
- 2.2 Introduction
- 2.3 Intellectual Property Rights
 - 2.3.1 Different types of Intellectual Property Rights
- 2.4 Patent
- 2.5 Copyright
- 2.6 Industrial Design Right
- 2.7 Trademark
- 2.8 Geographical Indication
- 2.9 Trade secret
- 2.10 Plant Varieties
- 2.11 Plagiarism
- 2.12 Let Us Sum Up

2.1 LEARNING OBJECTIVES

After going through this module, you will be able to -

- explain about intellectual property rights
- describe different types of intellectual property rights
- describe patent and copyrights
- describe about geographical indication rights
- describe trademark and trade secrets
- define plagiarism

2.2 INTRODUCTION

In the previous courses we have learnt about the fundamentals of computer system. We have also learnt about the basics of internet, ICT and open educational resources. We now know how to use ICT for different tasks such as for communication, collaboration and

for support. In the first course we have learnt to use the MS-Office Software with an emphasis on MS Word, MS Excel and MS Power Point.

In this module, we will learn how to use all of the software, resources and techniques that we have learnt in the earlier modules in a safe, secure and ethical way. When we use e-resources available in the internet, we need to properly credit the authors/creators or the parent organizations of these resources we use. The best way to do this would be to follow the intellectual property rights and by not indulging in plagiarism.

Intellectual property rights can be simply said to be the ownership rights assigned to a creative ideas of the human mind. We will learn about intellectual property rights and its different types in detail in the sections below. Also, intellectual property rights though of the same nature, their ownership nature and time vary from country to country. Since we live in India, the intellectual property rights discussed in here will cater to the intellectual property rights or laws followed in India. A person can be said to be guilty of plagiarism if the person copies another person's idea or material without giving due credit to the creator's work. There are different rules and forms available how a work can be credited. We will also discuss plagiarism in detail later in this chapter.

Let us now look at intellectual property rights in detail.

2.3 INTELLECTUAL PROPERTY RIGHTS (IPR)

Intellectual property is a term given to creations of human mind that are mostly in intangible form [1]. According to the definition in World Intellectual Property Organization (WIPO), "Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce" [2]. The creators or owners of these intellectual properties are given certain rights to their works. These rights are known as Intellectual Property Rights or IPR.

Intellectual Property Rights can be defined as the legal rights governing the use of creations of the human mind [1]. The intellectual property rights comprises of copyrights, patents, trademarks, trade secrets, rights to design layouts, rights to geographical indicators and rights to integrated circuits designs as well. All of the works that fall under any of these categories fall under the intellectual property rights. So, any works of music, literature,

innovative creations, formula's for market products all are protected under the intellectual property rights. Integrated circuits designs used in computer and other electrical devices are also protected by these IP rights.

The intellectual property rights are different for different countries. One of the differences in these rights comes in the form of nature and number of years of ownership over the creative product. But certain international intellectual property right organizations and treaties have been formed. And many countries are signatory to these agreements for smooth transition of the intellectual property rights in member countries. India has also been a signatory to many international intellectual property agreements [3]. The main purpose of these intellectual property treaties is to encourage the creation of a large variety of intellectual goods and to provide protection to these works in multiple countries through the use of a single application.

Some of these agreements are listed below:

- **Paris Convention:**

According to the Paris Convention for the Protection of Industrial Property, “any person from a country that is a signatory can apply for a patent or trademark in any other signatory country and that person will be given the same enforcement rights and status as a national of that country would be” [3]. Currently, this treaty has 177 member countries including India.

- **Berne Convention:**

The Berne Convention for the Protection of Literary and Artistic Works, is an international agreement governing copyright and is concerned with many aspects of modern copyright law [4]. According to this treaty, copyright held by citizens of signatory countries are recognized by all other member countries [3]. Currently, this treaty has 176 member countries including India.

- **Madrid Convention:**

The Madrid system is an international agreement for governing trademark agreements for multiple countries. According to the Madrid system, “a person can file a single trade mark

application at their own national office and the protection will be provided for that trademark in multiple countries” [3]. Currently, this treaty has 97 member countries including India.

- **Patent Cooperation Treaty:**

The Patent Cooperation treaty is an international agreement for governing patent laws for multiple countries that concluded in 1970 [5]. According to the Patent Cooperation Treaty, “a person can file a single patent application at their own national office and the protection will be provided for that patent in each of the member countries” [3]. Currently, this treaty has 152 member countries including India.

2.3.1 Different Types of Intellectual Property Rights

According to WIPO, intellectual property rights can be divided into two categories: copyright rights and industrial property rights [6]. The first category consists of copyright rights and rights similar to this kind and the second category consists of industrial property rights. The first category of rights comprises of rights for literary and artistic works. For example, writing books and novels fall in the first category. The second category of rights includes industrial property rights such as trademarks, trade secrets and geographical indications. For example, trade secrets like the formula for Coco Cola soft drink or a geographical indicator for Muga silk dress material that is produced only in Assam.

Generally, there are seven types of intellectual property rights. These seven types of rights are:

- patents,
- copyrights,
- industrial design rights,
- trademarks,
- geographical indications,
- trade secrets and
- plant variety rights.

Let us now, look at each of these seven intellectual property rights in detail.

2.4 PATENTS

According to Wikipedia, “Patents can be defined as the right granted to the owner to exclude others from making, using, selling, offering to sell, and importing an invention for a limited period of time, in exchange for the public disclosure of the invention” [7]. The invention that is to be patented may be a solution to a specific technological problem, which may be a product or a process. “Holding a patent does not give a right to make or use or sell an invention but instead a patent provides, from a legal standpoint, the right to exclude others from making, using, selling, offering for sale, or importing the patented invention for the term of the patent” [7].

Patents are made public knowledge so that it can motivate other people to make their own inventions. A patent provides the authors or owners of the patent with protection for their inventions. This protection is generally granted for a limited period, generally 20 years [8]. In India, patents are granted for 20 years [9].

Once an invention has been made, the patents should be filed at the earliest possible time. The application for the invention to be patented should mention the specifics of the invention and mention how the invention will help and how the invention is important for people. There are many risks if filing of the patents is delayed. One of the risks associated with delays is that similar invention can be patented by other inventor.

Indian Laws regarding Patents

Patents are granted and enforced upon by government bodies using national laws and also by use of the international treaties among member nations. For India, patents are granted by the Intellectual Property Office. The patent system is governed by the Patents Act, 1970 and was amended again in 2005 by the Patents (Amendment) Act, 2005 and the Patents Rules, 2003 [10]. The most recent amendment for Patent Rules was in 2016.

According to the Indian Patent Act [9], “an invention is patentable subject matter only if it meets the following criteria –

- i) It should be novel.

- ii) It should have inventive step or it must be non-obvious

iii) It should be capable of Industrial application.

iv) It should not attract the provisions of section 3 and 4 of the Patents Act 1970". [9]

Some examples of famous patents are listed below:

- **Magnetic Levitation (Maglev):** The patent for a maglev train was patented first in 1967. The design was based on using "superconducting electromagnets to generate a suspension force, for floating the train above the ground, and it was to use a propellor, jet, rocket to achieve thrust" [11].
- **Global Positioning System (GPS):** One of most commonly used patents nowadays is Global Positioning System (GPS). It was patented by Roger L. Easton patented in 1974. GPS describes methods to enable navigation with satellites.

2.5 COPYRIGHT

"Copyright is the exclusive right given to the creator of a creative work to reproduce the work, usually for a limited time" [12]. This work may be in a literary, artistic, educational, or musical form [12]. According to WIPO, "copyright laws grant authors, artists and other creators protection for their literary and artistic creations, generally referred to as 'works'" [6].

According to WIPO, the categories of works that can be protected by copyright laws include "novels, poems, plays, reference works, newspapers, advertisements, computer programs, databases, films, musical compositions, choreography, paintings, drawings, photographs, sculpture, architecture, maps and technical drawings" [6]. This protection is generally granted for sixty years. In the case of original literary, dramatic, musical and artistic works the copyright is for the lifetime of the author and another sixty years from the year in which the author dies.

Indian Laws regarding Copyrights

In India, the first copyright act was Copyright Act, 1957 which came into effect from January 1958 and lays down the modes of assignment of copyright in India [13]. The author

of a work is generally considered as the first owner of the copyright under the Copyright Act 1957. This Act has been amended six times till date since then, i.e., in 1983, 1984, 1991, 1994, 1999 and 2012. According to the Indian copyright law, “literary works, dramatic works, musical works, artistic works, cinematograph films and sound recordings” are protected [13].

Some examples of copyrights are listed below:

- **Literary works** like “Aseemat Jar Heral Seema” by Kanchan Boruah, “Mamore Dhora Taruwal” by Indira Goswami
- **Musical works** like “Manuhe Manuhar Babe” by Dr. Bhupen Hazarika, “Mur Minoti” by Jayanta Hazarika, “Pakhi Pakhi” by Zubeen Garg.
- **Motion pictures** like “Avengers: Endgame”, “3 Idiots”, “Mission China” etc

2.6 INDUSTRIAL DESIGN RIGHT

According to Wikipedia, “an industrial design right also called design right protects the visual design of objects that are not purely utilitarian” [14]. In simpler words, an industrial design can be a two- or three-dimensional pattern used to produce a product, industrial commodity or handicraft [15]. Industrial design is what makes a product look appealing, and as such, it increases the commercial value of goods. An industrial design may consist of the creation of a shape, configuration or composition of pattern or color, or combination of pattern and color in three-dimensional form containing aesthetic value [14].

According to the Designs Act, 2000, design is defined as, “the features of shape, configuration, pattern, ornament or composition of lines or colours applied to any article by any industrial process or means, whether manual, mechanical or chemical, separate or combined, which in the finished article appeal to and are judged solely by the eye, but does not include any mode or principle of construction or anything which is in substance a mere mechanical device and does not include any trademark or property mark or artistic work” [16].

Indian Laws regarding Industrial Design Rights

In India, the Design Act 2000 protects the industrial design rights. Generally, the protection rights are provided for a period of ten years and can be renewed for a additional

five years. The following are the essential requirements for the registration of 'design' under the Designs Act, 2000 [17]:

- i. "The design should be new or original, not previously published or used in any country before the date of application for registration. The novelty may reside in the application of a known shape or pattern to new subject matter.
- ii. The design should relate to features of shape, configuration, pattern or ornamentation applied or applicable to an article.
- iii. The design should be applied or applicable to any article by any industrial process.
- iv. The features of the design in the finished article should appeal to and are judged solely by the eye. This implies that the design must appear and should be visible on the finished article, for which it is meant.
- v. Any mode or principle of construction or operation or any thing which is in substance a mere mechanical device, would not be a registrable design.
- vi. The design should not include any Trade Mark or property mark or artistic works as defined under the Copyright Act, 1957" [17].

Some examples of industrial design rights are listed below:

- **Coca-Cola contour bottle:** The Coca-Cola bottle is excellent example of industrial design that captivated the then market due to its unique design. The design dates back to 1915 when the company asked bottle suppliers to design a new bottle that is easily recognizable with the company.




Figure 1.1: Coca-Cola contour bottle

- **Mini Cooper Car:** The Mini is another design classic that was developed of the restrictions in fuel supply. These restrictions were put during the 1950s and was caused by the Suez crisis.



Figure 1.2: Iconic Mini Cooper car

Industrial Design Right	Video link : https://youtu.be/Qy-mElcpsc4	Scan with QR Code 
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2.7 TRADEMARKS

A trademark is a type of intellectual property consisting of a recognizable sign, design, or expression which identifies products or services of a particular source from those of others [18]. The trademark owner can be an individual, or a business organization, or any legal entity [18]. Trademarks are protected by intellectual property rights and often displayed on company buildings.

A trademark is typically a name, word, phrase, logo, symbol, design, image, or a combination of these elements [18]. Some trademarks do not fall into these standard categories and belong to other categories such as those based on colour, smell, or sound (like jingles) [18].

A trademark may be designated by the following symbols [18]:

- Trademark symbol (™): The letters "TM" in superscript denotes an unregistered trademark, i.e. a mark used to promote or brand goods.
- Registered trademark symbol (®): The letter "R" surrounded by a circle is used to denote a registered trademark.



Figure 1.4: Trademark symbols

Indian Laws regarding Industrial Design Rights

The Trade Marks Registry was established in India in 1940. The Trade Marks Act, 1999 contains rules and regulations related to the industrial design rights in India. The objective of the Trade Marks Act, 1999 is to register trademarks applied for in the country and to provide for better protection of trade mark for goods and services and also to prevent fraudulent use of the mark [19].

Some examples of trademarks are listed below:

- **Symbol as trademark:** The McDonald “M” is an example of a trademark.
- **Symbol as trademark:** The half eaten apple symbol is a famous trademark of the Apple Inc company and is famous for its quality electronic devices.
- **Person as trademark:** Coco Channel is a perfect example of a trademark of a person. The famous designer Coco Chanel built her successful fashion empire by using her name.

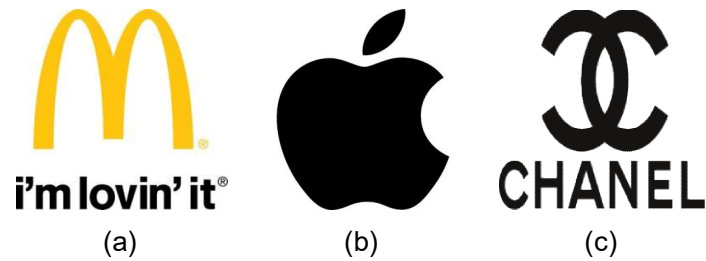


Figure 1.5: Trademark symbols for (a) McDonald, (b) Apple and (c) Channel

2.8 GEOGRAPHICAL INDICATORS

According to WIPO, a geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin [20]. In order to function as a GI, a sign must identify a product as originating in a given place [20]. Geographical indications are typically used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products [20].

Indian Laws regarding Geographical Indicators

In India, the Geographical Indications of Goods (Registration and Protection) Act, 1999 is used to protect the geographical indicators in India. The GI tag ensures that none other than those registered as authorized users are allowed to use the popular product name [21]. Darjeeling tea was the first GI to be tagged in India in 2004-2005. Some other examples of geographical indicators are listed below:

- Muga Silk of Assam falls under handicraft category.
- Assam (Orthodox) Tea falls under agricultural category.
- Mysore Agarbatthi from Karnataka falls under manufacturing category.

2.9 TRADE SECRETS

According to the definition in WIPO, trade secrets are intellectual property (IP) rights on confidential information which may be sold or licensed [22].

According to WIPO, to qualify as a trade secret, the information must be [22]:

- commercially valuable because it is secret,
- be known only to a limited group of persons, and
- be subject to reasonable steps taken by the rightful holder of the information to keep it secret, including the use of confidentiality agreements for business partners and employees.

Trade secrets can also be defined as a type of intellectual property that comprises formulas, practices, processes, designs, instruments, patterns, or compilations of information that have inherent economic value because they are not generally known or readily ascertainable by others, and which the owner takes reasonable measures to keep secret [23, 24].

Some examples of trade secrets are listed below:

- Google Inc.'s search algorithm is a trade secret.
- The formula for the drink Coca-Cola is an example of a trade secret.
- The ingredients for Kentucky Fried Chicken's (KFC) recipe is a trade secret.

2.10 PLANT VARIETY RIGHTS

According to the definition in Wikipedia, plant breeders' rights (PBR), also known as plant variety rights (PVR), are rights granted to the breeder of a new variety of plant that give the breeder exclusive control over the propagating material (including seed, cuttings, divisions, tissue culture) and harvested material (cut flowers, fruit, foliage) of a new variety for a number of years [25].

In order to qualify for these exclusive rights, a variety must be new, distinct, uniform, and stable [26]. A variety is [25]:

- “new if it has not been commercialized for more than one year in the country of protection;

- distinct if it differs from all other known varieties by one or more important botanical characteristics, such as height, maturity, color, etc.;
- uniform if the plant characteristics are consistent from plant to plant within the variety;
- stable if the plant characteristics are genetically fixed and therefore remain the same from generation to generation, or after a cycle of reproduction in the case of hybrid varieties” [25].

Indian Laws regarding PVR

In India, the plant variety rights are protected under the Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act). The Act was enacted to grant intellectual property rights to plant breeders, researchers and farmers who have developed any new or extant plant varieties [27]. It gives a dual right – one is for the variety and the other is for the denomination assigned to it by the breeder. The period of protection for field crops is 15 years and for trees and vines is 18 years [27].

2.11 PLAGIARISM

According to the definition provided in the website of University of Oxford, plagiarism can be defined as follows [28]:


“Plagiarism is presenting someone else’s work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.”

There are different forms of plagiarism. Some of these are listed below:

- **Verbatim** or word for word: In this type of plagiarism, the words are taken without quotation and no clear acknowledgement is given to the source of the work.

- **Paraphrasing:** Paraphrasing is simply altering a few words and changing the order of someone else's work and presenting it as your own.
- **Collusion:** Collusion involves unauthorized collaborations, failure to attribute assistance received, or failure to follow precisely regulations on the work done.
- **Inaccurate citation:** This is done when the work does not include citations in an accurate manner that credits the authors and the reference material properly.
- **Self-plagiarism:** Self-plagiarism involves plagiarism of your own work. This is done when similar copies of work or partial copy of a work is submitted from a full copy of work.

There are many tools available both free and paid to check the plagiarism of your work. Some of the common tools available to check plagiarism in your work using paid software are Urkund and Turnitin. There are also many free website and tools available online where an author can simply sign in and then check their work for plagiarism.

Trade Secrets and Plagiarism	<p style="text-align: center;">Video link :</p> <p style="text-align: center;">https://youtu.be/xl-R8lvjKDo</p>	<p style="text-align: center;">Scan with QR Code</p> 
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2.12 LET US SUM UP

- Intellectual property (IP) refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.
- Generally, there are seven types of intellectual property rights. These seven types of rights are: patents, copyrights, industrial design rights, trademarks, geographical indications, trade secrets and plant variety rights.
- Patents can be defined as the right granted to the owner to exclude others from making, using, selling, offering to sell, and importing an invention for a limited period of time, in exchange for the public disclosure of the invention.

- Copyright is the exclusive right given to the creator of a creative work to reproduce the work, usually for a limited time.
- An industrial design right also called design right protects the visual design of objects that are not purely utilitarian. In simpler words, an industrial design can be a two- or three-dimensional pattern used to produce a product, industrial commodity or handicraft.
- A trademark is a type of intellectual property consisting of a recognizable sign, design, or expression which identifies products or services of a particular source from those of others.
- A trademark is typically a name, word, phrase, logo, symbol, design, image, or a combination of these elements.
- A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- Trade secrets are intellectual property (IP) rights on confidential information which may be sold or licensed.
- Plant breeders' rights (PBR), also known as plant variety rights (PVR), are rights granted to the breeder of a new variety of plant that give the breeder exclusive control over the propagating material (including seed, cuttings, divisions, tissue culture) and harvested material (cut flowers, fruit, foliage) of a new variety for a number of years.
- Plagiarism is presenting someone else's work or ideas as your own, with or without their consent, by incorporating it into your work without full acknowledgement. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under this definition.

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