UNIT II

E governance, E- commerce, E- Contract, E- banking, E-tender
Digital Signature and Electronic Signature
Introduction to IT Act • **History** • **Objective** • **Features** • **Applicability and Non- Applicability**
Summary of IT Act

<u>E governance-</u>

E-governance is the public sector's use of information and communication technologies in order to enhance information and service delivery, motivating inhabitant involvement in the decision-making process and making government more accountable, transparent and effective. E-governance involves new styles of management, novel ways to decide policy and investment, new ways of accessing education, and listening to citizens and new ways of organizing and delivering information and services. Blake Harris summarizes the e-governance as the following; E-governance is not just about government web site and e-mail. It is not just about service delivery over the Internet. It is not just about digital access to government information or electronic payments. It will change how citizens relate to governments as much as it changes how citizens relate to each other. It will bring forth new concepts of citizenship, both in terms of needs and responsibilities. E-governance will allow citizens to communicate with government, participate in the governments' policy-making and citizens to communicate each other. The e-governance will truly allow citizens to participate in the government decision-making process, reflect their true needs and welfare by utilizing e-government as a tool.

The purpose of E- governance is to give better access, accountability and efficiency in the delivery of government information and services. E-Governance has capability to provide all government information and services on internet to the public and private sector. An e-governance initiatives and innovations will ensure a more democratic, transparent and accountable framework for the public and private apparatus to operate in. The governments of developing countries must establish a suitable environment for e-governance. E-governance is the method of service delivery and information dissemination to citizens using electronic means providing many benefits over the conventional system

The aim of e-governance is to make the interaction of the citizens with the government offices (G to P) easy to share information with transparency and reliability .

The strategic objective of e-governance is to support and simplify governance for all parties - government, citizens and businesses. The use of ICTs can connect all three parties and support processes and activities. In other words, in e-governance uses electronic means to support and stimulate good governance. Therefore the objectives of e-governance are similar to the objectives of good governance.

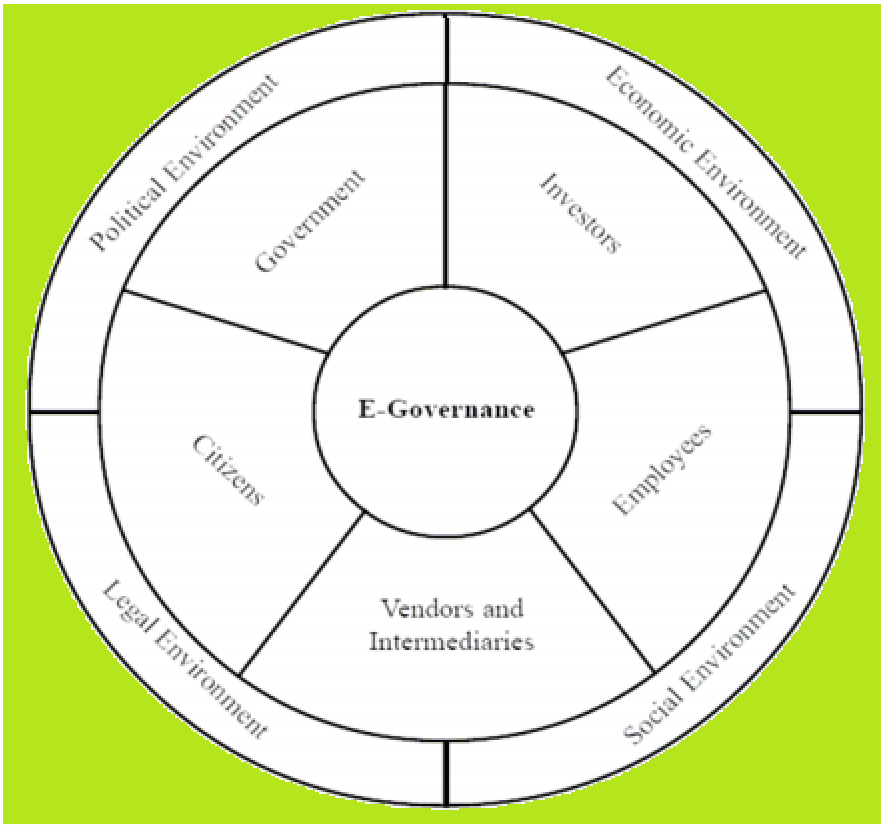
There are many obstacles to execute E-governance policies.

These include insufficiency of funds, infrastructural problems, scarce manpower, citizen enthusiasm, data accumulation, legal framework readiness, and maintenance.

People's resistance to any change. It is important to design such employee-oriented Human Resource strategies as would allow the organisation to prepare employees for change and also support them to absorb rather than adsorb the changed systems.

There are also cultural obstacles which refer to values, beliefs, mind-set, practices and customs of people.

Companies adopting e governance must develop customer orientation which understand the requirements of the user, explore new ways of presenting information to meet customer needs; design feedback mechanisms; manage customer relationships; streamline processes; develop good communication process, organise information, work more flexibly; make better decisions, coordinate activities, focus on major issues in the context of personnel which include doing job analysis again to redefine job responsibilities and other job dimensions of various jobs affected by the change.



E- commerce-

E-Commerce or Electronics Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery. E-commerce means buying and selling of products or services over electronic systems such as the internet and other computer networks. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, Electronic Data Interchange (EDI), inventory management systems, and automated data collection systems.

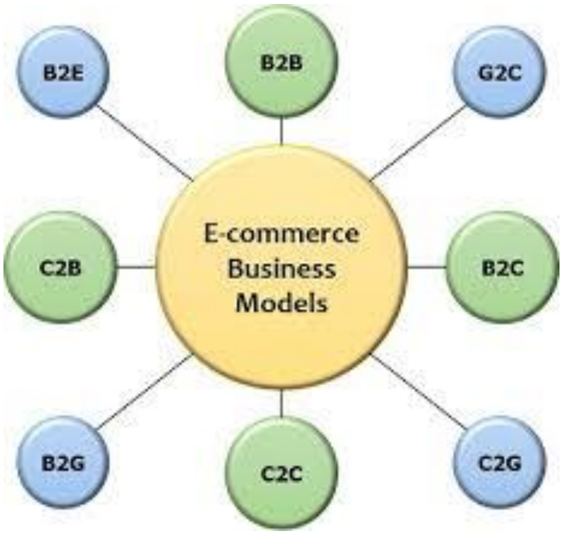
E-commerce refers to the paperless exchange of business information using the following ways:

- Electronic Data Exchange (EDI)
- Electronic Mail (e-mail)
- Electronic Bulletin Boards
- Electronic Fund Transfer (EFT)
- Other Network-based technologies

E-Commerce provides the following features:

- **Non-Cash Payment**: E-Commerce enables the use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website, and other modes of electronics payment.
- **24x7 Service availability**: E-commerce automates the business of enterprises and the way they provide services to their customers. It is available anytime, anywhere.
- **Advertising/Marketing**: E-commerce increases the reach of advertising of products and services of businesses. It helps in better marketing management of products/services.
- **Improved Sales**: Using e-commerce, orders for the products can be generated anytime, anywhere without any human intervention. It gives a big boost to existing sales volumes.
- **Support**: E-commerce provides various ways to provide pre-sales and post-sales assistance to provide better services to customers.
- **Inventory Management**: E-commerce automates inventory management. Reports get generated instantly when required. Product inventory management becomes very efficient and easy to maintain.
- **Communication improvement**: E-commerce provides ways for faster, efficient, reliable communication with customers and partners.

E-commerce business models can generally be categorized into the following categories-



- Business - to - Business (B2B)
- Business - to - Consumer (B2C)
- Consumer - to - Consumer (C2C)
- Consumer - to - Business (C2B)
- Business - to - Government (B2G)
- Government - to - Business (G2B)
- Government - to - Citizen (G2C)

E- contracts

E-contract is one of the divisions of e-business. It holds a similar meaning of traditional business wherein goods and services are switched for a particular amount of consideration with the only difference that the contract here takes place through a digital mode of communication like the internet. It provides an opportunity for the sellers to reach the end of consumer directly without the involvement of the middlemen. Electronic contracts (contracts that are not paper based but rather in electronic practise) are born out of the need for speed, suitability and efficiency.

.The Indian Contract Act, 1872 rules the way in which contracts are made and completed in India. It rules the way in which the requirements in a contract are implemented and codifies the effect of a breach of contractual provisions.

Within the outline of the Act, parties are free to contract on any terms they choose. Indian Contract Act comprehends of limiting factors subject to which contract may be entered into, executed and breach enforced. It only provides an outline of rules and regulations which govern creation and performance of contract. The rights and duties of parties and terms of agreement are definite by the contracting parties themselves. The court of law acts to enforce agreement, in case of default.

Essentials of an electronic contract:

As in every other contract, an electronic contract also requires the following necessary requirements:

1. **An offer requirements to be made**

In many contacts (whether online or conventional) the offer is not made directly one-on-one. The consumer ‘browses’ the available goods and services showed on the seller’s website and then chooses what he would like to purchase. The offer is not made by website showing the items for sale at a particular price. This is essentially an invitation to offer and hence is revocable at any time up to the time of acceptance. The offer is made by the customer on introduction the products in the virtual ‘basket’ or ‘shopping cart’ for payment.

2. **The offer needs to be acknowledged**

As stated earlier, the acceptance is usually assumed by the business after the offer has been made by the consumer in relation with the invitation to offer. An offer is revocable at any time until the acceptance is made.

3. **There has to be legal consideration**

Any contract to be enforceable by law must have legal consideration, i.e., when both parties give and receive something in return. Therefore, if an auction site eases a contract between two parties where one Ecommerce – Legal Issues such as a person provides a pornographic movie as consideration for purchasing an mp3 player, then such a contract is void.

4. **There has to be an intention to create lawful relations**

If there is no intention on the part of the parties to create lawful relationships, then no contract is possible between them. Usually, agreements of a domestic or social nature are not contracts and therefore are not enforceable, e.g., a website providing general health related data and instructions.

5. **The parties must be able to contract.**

Contracts by minors, lunatics etc. are void. All the parties to the contract must be lawfully competent to enter into the contract.

6. **There must be free and unaffected consent**

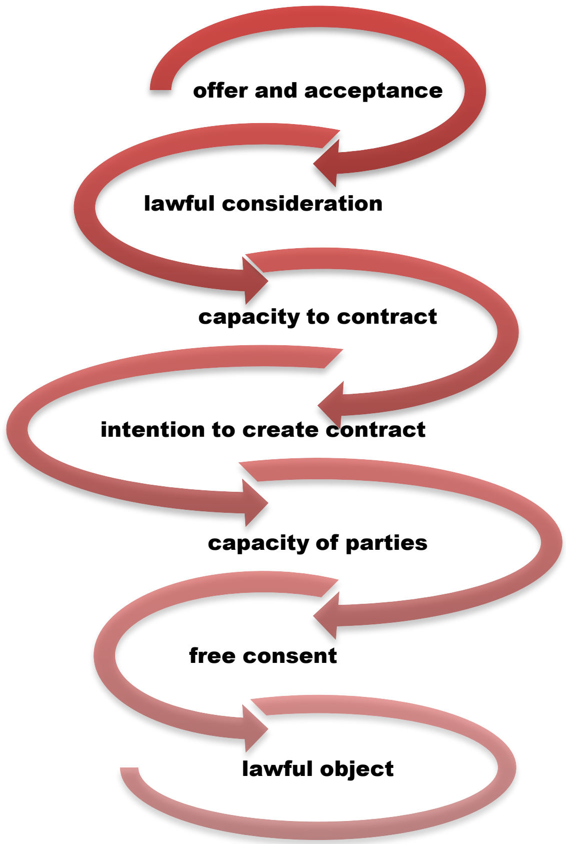
Consent is said to be free when there is absence of coercion, misrepresentation, undue influence or fraud. In other words, there must not be any agitation of the will of any party to the contract to enter such contract. Usually, in online contracts, especially when there is no active real-time communication between the contracting parties, e.g., between a website and the customer who buys through such a site, the click through process ensures free and genuine consent.

7. **The object of the contract need to be lawful**

A valid contract presumes a lawful object. Thus a contract for selling narcotic drugs or pornography online is void.

8. **There must be conviction and possibility of performance**

A contract, to be enforceable, must not be ambiguous or unclear and there must be possibility of performance. A contract, which is impossible to perform, cannot be enforced, e.g., where a website promises to sell land on the moon.



Processes available for forming electronic contracts include:

I. E-mail: Offers and acceptances can be exchanged entirely by e-mail, or can be collective with paper documents, faxes, telephonic discussions etc.

II. Web Site Forms: The seller can offer goods or services (e.g. air tickets, software etc.) through his website. The customer places an order by completing and communicating the order form provided on the website. The goods may be actually delivered later (e.g. in case of clothes, music CDs etc.) or be directly delivered electronically (e.g. e-tickets, software, mp3 etc.).

III. Online Agreements: Users may need to take an online agreement in order to be able to avail of the services e.g. clicking on “I accept” while connecting software or clicking on “I agree” while signing up for an email account.

Several laws acting in unification are trying to regulate the business transactions of E-contract. They are as follows:

- Indian Contract Act,1872
- Consumer Protection Act,1986
- Information Technology Act,2000
- Indian Copyright Act,1957
- The Information Technology (Intermediaries Guidelines) Rules 2011 to regulate the intermediaries such as verification service providers and shipping service providers to safeguard that the product or service is actually delivered.
- were brought into the legal framework after proclamation of (PSS Act, 2007).
- The Payment and settlement Systems Act, 2007, 2007 as well as the Payment and Settlement System Regulations, 2008 made under the Act came into effect from August 12, 2008 to regulate bring the payment gateways which provide a very important position as the primary processor of the payment for the merchants Further, the Reserve Bank of India, issued additional guidelines initiating all such gateways and payments processors to register under the said act.
- The authority of the transactions of E-contract is established under the Information Technology Act, 2000 (IT Act, 2000). It explains the reasonable mode of acceptance of the offer. IT Act, 2000 also rules the revocation of offer and acceptance.

However, definite provisions that regulate E-contract transactions conducted over the internet, mobile phones, etc. are vague. With numerous cross border transactions also being conducted over the internet, specific law guarding the Indian customers and Indian businesses are essential and Indian laws are gravely insufficient on this issue.

Example of E commerce/ E- contract

Indian Railway Catering and Tourism Corporation Limited (IRCTC) is certainly the major e-commerce site in India and in India's answer to private capitalist ventures.

IRCTC was set up as a subsidiary of the Indian railways for the exclusive purpose of providing catering services and ticketing services for the Indian Railways.

However, of late, it has extended its wing and now covers sectors such as flights and hotel bookings. The flagship was established in 2002 and has transformed the online travel booking business in India. IRCTC functions both in the business to business and business to consumer segment. The site offers the only link for purchasing Indian railway tickets online and even agent sites (B2B) have to link them to IRCTC to provide online booking services for customers. IRCTC offers a large option for consumers for payment of buying tickets online. IRCTC however, is one of the few enduring e-commerce sites which charged transactions charges from customers, which is different bank to bank.

Through IRCTS several customer enter daily into a new dimension of contract i.e. E-contract. E-contract now plays an important role both for the customer and the seller. Customer has a lot of choice to choose a product and seller through e-contract reach to large customers.

E- banking-

E-banking is an electronic consumer interface and an alternative channel of distribution for banking services and products. E-banking is a process through which banking consumers manage their banking transaction without even visiting a bank branch.

The importance of e-banking is growing day by day as it maximizes the advantage for banks and its clients. Even been a costly and risky affair, bank and financial institutions largely investing in latest information system. Other way round e-banking provides economies to the operations as it enables banks to reduce their branch network and number of banking staff.

Electronic banking can be defined as the use of electronic delivery channels for banking products and services, and is a subset of electronic finance (1). The most important electronic delivery channels are the Internet, wireless communication networks, automatic teller machines (ATMs), and telephone banking. Internet banking is a subset of e-banking that is primarily carried out by means of the Internet. The term transactional e- banking is also used to distinguish the use of banking services from the mere provision of information (2).

E- tendering

E- Tendering refers to purchasing or hiring services or obtaining goods through E-platform. Under e-tendering goods or services are purchased/hired via web portal. The tenders are floated on website showing requirement of services of the specified quality, tentative price is also shown and bids are invited online and opened at a specific date & time. On the basis of bids received the evaluation of L-1 (lowest) is done. On the basis of lowest evaluated bidder the order is placed. In this manner the goods or services can be hired at most competitive prices, in a fair, just and transparent manner. In this way e-tendering is transparent, convenient with least time and cost overruns. On the other hand tendering of goods, services or goods without using E-platform or e-publishing is manual procurement. In E- tendering, for uploading or floating of tenders Digital Certificate is required

Advantages of E tendering-

E- tendering is paper less, electronic system of uploading/downloading of documents whereas manual tendering requires dealing with paper & also cumbersome.

Under e- tendering the tenders are published on web site, documents can be downloaded & can be accessed anytime anywhere whereas in manual tendering it has to be advertised in newspaper & documents required to be collected manually.

E- tendering requires less time, easy & convenient whereas manual tendering is cumbersome and requires lots of time in evaluation of L-1 (lowest evaluated bidder.)

E- tendering is latest technology effectively being adopted gradually by all states whereas manual tendering is primitive way of advertising tenders.

E- tendering is transparent, competitive & fair method way of procuring goods, services or works whereas manual tendering is time consuming, cumbersome, requires handling of large volume of papers.

Digital Signature

Digital Signature Certificates (DSC) are the digital equivalent (that is electronic format) of physical or paper certificates. A digital certificate can be presented electronically to prove the identity of individual, to access information or services on the internet or to sign certain documents digitally.

In order to be called legally binding all electronic communications or transactions must meet foll fundamental requirements-

1- Authenticity of the sender, in order to enable the receiver to determine who sent the message.
2- Message's integrity- the recipient must be able to determine whether or not the message has been modified en route or is incomplete
3- Non repudiation- the ability to ensure that the sender cannot deny sending the message or its contents.

Such high level of security is ensured by a data encryption technique- cryptography. Cryptography is of 2 types- Symmetric Cryptography (Private key cryptographic system) and Asymmetric Cryptography (Private key cryptographic system). DS are based on Asymmetric Cryptography. It is a block of data at the end of the electronic message that attests to the authenticity of the message. It requires –

1- Key pair- Private key for encryption and public key for decryption.
2- A hash function (an algorithm which creates a digital representation or fingerprint in form of hash value which is unique. Any change to the message invariably produces a different hash result. Thus it provides clear evidentiary connection to the original message content by ensuring that there has been no modification of message after being digitally signed.

Sec 2 (p) of IT Act states that digital signature means authentication of any electronic record by a subscriber by means of an electronic method or procedure in accordance with the provisions of section 3. Sec 3 lays down that an electronic record can be authenticated by affixing digital signature, effected by the use of asymmetric crypto system and hash function.

The DS is further authenticated by issuance of a certificate by a trusted third party, the Certifying Authority.

The subscriber/ sender of the message, applies to the CA for DSC. After verifying the identity of the subscriber, the CA issues a certificate. The certificate is forwarded to the repository maintained by the Controller. The recipient on receiving the message checks the validity and status of the Subscriber's certificate from Repository.

Electronic Signatures

It is a generic term that refers to all the various methods by which one can sign an electronic record. An Electronic Signature is generated electronically and can be used to make sure of the veracity and legitimacy of data and ensure message authentication. It provides the ability to

- Verify the author, date and time of signature
- Be used by third parties for verification and resolution of disputes

Sec 3 read with Sec 2 (ta) of the IT act state that, electronic signature means authentication of any electronic record by a subscriber by means of a reliable electronic technique specified in the Second Schedule and includes digital signature.

Technologically speaking there is no difference between electronic signature and digital signature. Both perform the same set of functions i.e.- signer's authentication, message integrity and non-repudiation. Examples of electronic signature may include, a name typed at the end of the mail by the sender, digitized image of a hand written signature, biometric signature, passwords, PIN, scanned signatures etc.

The concept of electronic signature was introduced by 2008 amendment act to ensure 'technological neutrality'. Under 2000 IT Act, it would have been mandatory for the subscriber to subscribe to digital signature based on an appropriate technology standard an if the subscriber obtains a Digital Signature based on other technology, it would not be considered lawful.

However, with the introduction of technological neutrality, subscriber would have the choice to adopt use any other mode in form of Electronic Signature as well.

Information Technology Act, 2000

History of cyber law-

IT Act 2000 is motivated by the United Nations Commission on International Trade Law (UNCITRAL) model law on electronic commerce (e-commerce), adopted in 1996 which provides for recognition to electronic records and according it the same treatment like a paper communication and record, to bring uniformity in the law in different countries by the United Nations.

The Department of Electronics (DoE) drafted the first bill in 1998 as the E Commerce Act, 1998. It was redrafted as the 'Information Technology Bill, 1999', and The Information Technology Act, 2000, was thus passed as the Act No.21 of 2000, got President assent on 9 June and was made effective from 17 October 2000. The act was substantially amended in 2008.

Objectives of the Act

The objectives of the Act are as follows:

ii. **Legal Recognition of Electronic Documents**- Grant legal recognition to all transactions done via electronic exchange of data or other electronic means of communication or e-commerce, in place of the earlier paper-based method of communication.

iii. **Legal Recognition of Digital Signatures-** Give legal recognition to digital signatures for the authentication of any information or matters requiring legal authentication

iv. **Facilitate the electronic filing of documents** with Government agencies and also departments

v. Facilitate the **electronic storage of data**

vi. Give legal sanction and also facilitate the **electronic transfer of funds** between banks and financial institutions

vii. Grant legal recognition to bankers under the Evidence Act, 1891 and the Reserve Bank of India Act, 1934, for keeping the books of accounts in electronic form.

viii. Amendment of the Indian Penal Code 1860, the Indian Evidence Act 1872, the Bankers' Books Evidence Act 1891, and the Reserve Bank of India Act 1934.

ix. Justice Dispensation Systems for cyber crimes, other Offenses and Contraventions

Features of the Information Technology Act, 2000

a. All electronic contracts made through secure electronic channels are legally valid.

b. Legal recognition for digital signatures.

c. Provides for Security measures for electronic records and also digital signatures

d. A procedure for the appointment of Controller or Adjudicating Officer for holding inquiries under the Act is finalized

e. Provision for establishing a Cyber Appellant Tribunal to handle all appeals made against the order of the Adjudicating Officer. An appeal against the order of the Cyber Appellant Tribunal is possible only in the High Court

f. Provision for the appointment of the Controller of Certifying Authorities (CCA) to license and regulate the working of Certifying Authorities. The Controller to act as a repository of all digital signatures.

g. Provisions for the constitution of a Cyber Regulations Advisory Committee to advise the Central Government and Controller.

h. The Act applies to offences or contraventions committed outside India

i. Senior police officers and other officers can enter any public place and search and arrest without warrant

Applicability and Non-Applicability of the Act

Applicability

i. According to Section 1 (2), the Act extends to the entire country, which also includes Jammu and Kashmir.

ii. Further, it does not take citizenship into account and provides extra-territorial jurisdiction. Section 1 (2) along with Section 75, specifies that the Act is applicable to any offence or contravention committed outside India as well.

iii. If the conduct of person constituting the offence involves a computer or a computerized system or network located in India, then irrespective of his/her nationality, the person is punishable under the Act.

Non-Applicability

The Act is not applicable to the following documents:

1. Execution of **Negotiable Instrument** under Negotiable Instruments Act, 1881, except cheques.
2. Execution of a **Power of Attorney** under the Powers of Attorney Act, 1882.
3. Creation of **Trust** under the Indian Trust Act, 1882.
4. Execution of a **Will** under the Indian Succession Act, 1925 including any other testamentary disposition by whatever name called.

5. Entering into a contract for the **sale of conveyance of immovable property** or any interest in such property.
6. Any such class of **documents or transactions as may be notified by the Central Government** in the Gazette.

SUMMARY OF ACT-

Chapter-II of the Act specifically stipulates that any subscriber may authenticate an electronic record by affixing his digital signature. It further states that any person can verify an electronic record by use of a public key of the subscriber.

Chapter-III of the Act details about Electronic Governance and provides inter alia amongst others that where any law provides that information or any other matter shall be in writing or in the typewritten or printed form, then, notwithstanding anything contained in such law, such requirement shall be deemed to have been satisfied if such information or matter is - rendered or made available in an electronic form; and accessible so as to be usable for a subsequent reference. The chapter also details the legal recognition of Digital Signatures.

Chapter-IV of the said Act gives a scheme for Regulation of Certifying Authorities. The Act envisages a Controller of Certifying Authorities who shall perform the function of exercising supervision over the activities of the Certifying Authorities as also laying down standards and conditions governing the Certifying Authorities as also specifying the various forms and content of Digital Signature Certificates. The Act recognizes the need for recognizing foreign Certifying Authorities and it further details the various provisions for the issue of license to issue Digital Signature Certificate.

Chapter-VII of the Act details about the scheme of things relating to Digital Signature Certificates. The duties of subscribers are also enshrined in the said Act.

Chapter-IX of the said Act talks about penalties and adjudication for various offences. The penalties for damage to computer, computer systems etc. has been fixed as damages by way of compensation not exceeding Rs. 1,00,00,000 to affected persons. The Act talks of appointment of any officers not below the rank of a Director to the Government of India or an equivalent officer of state government as an Adjudicating Officer who shall adjudicate whether any person has made a contravention of any of the provisions of the said Act or rules framed there under. The said Adjudicating Officer has been given the powers of a Civil Court.

Chapter-X of the Act talks of the establishment of the Cyber Regulations Appellate Tribunal, which shall be an appellate body where appeals against the orders passed by the Adjudicating officer shall be preferred.

Chapter-XI of the Act talks about various offences and the said offences shall be investigated only by a Police Officer not below the rank of the Deputy Superintendent of Police. These offences include tampering with computer source documents, publishing of information, which is obscene in electronic form and hacking.

The Act also provides for the constitution of the Cyber Regulations Advisory Committee, which shall advice the government as regards any rules, or for any other purpose connected with the said act. The said Act also proposes to amend the Indian Penal Code, 1860, the Indian Evidence Act, 1872, The Bankers' Books Evidence Act, 1891, The Reserve Bank of India Act, 1934 to make them in tune with the provisions of the IT Act.