Unit III

CHAPTER 7

Introduction to Legal Aspects of Digital Forensics

Syllabus Topic : Laws and Regulations

7.1 Laws and Regulations

Q. 7.1.1	Write a short note on laws and regulations ? *(Ref. Sec. 7.1)*	**(5 Marks)**
Q. 7.1.2	Explain criminal law ? *(Ref. Sec. 7.1)*	**(5 Marks)**
Q. 7.1.3	Explain civil law ? *(Ref. Sec. 7.1)*	**(5 Marks)**
Q. 7.1.4	Explain administrative/regulatory law ? *(Ref. Sec. 7.1)*	**(5 Marks)**

- While building a cybercrime case it is very important to define the criminality in terms of bodies of law and the basic criminal justice theory.
- Computers, networks, and the information that goes through them are, similar to other parts of our lives, subject to a befuddling number of laws that have been ordered by authoritative bodies at distinctive levels of government such as local ,state, national and international, made by courts as case law, or set down through authoritative requests or administrative bodies.
- Since the law is such a maze of caught and continually developing fundamentals, various non-lawyers don't even try understanding how exactly legitimate system work and how the different laws interacted with one another. In this unit we are studying US laws.

- Laws can be divided into three different bodies and those are :
  1. Criminal law
  2. Civil law
  3. Administrative/regulatory law.

1. Criminal Law

- Criminal laws are made to protect society and individual singular persons, from harmful behaviour. They are additionally intended to punish offenders as a discouragement both to the wrongdoer and to others, and by placing the offender in the jail they ensure that there will be no further risk from offenders.
- In extreme cases they take the offenders live by giving death sentence or penalty.
- Criminal protests can be recorded or filed by :
  1. The individual (s)
  2. Who are hurt?
  3. Law authorization officers
  4. People who watch the offense.
- Be that as it may, the charges are indicted not for the casualty but rather in the interest of the governmental entity having jurisdiction. That is, a wrongdoing or crime characterized in the state penal code is prosecuted by the state, and a federal crime is prosecuted by the federal government.

The style of the case term is used at the top of all the court documents to identify a case. The example of the case brought under criminal law," *MySpace Catches a Murderer" or* The State of Texas vs. John Smith.

- There are some terms defined in criminal cases :
  - **Complaint :** The person or entity that files the charges.
  - **Defendant :** The person (or company) against whom the charges are brought.
  - **Penalties :** For violating a criminal law can include monetary payment or loss of.
- Liberty and range from light to severe including :
  1. A warning citation (usually in the case of traffic laws or other lowest level wrongdoing).
  2. A citation that imposes a fine (cash or money payment that goes to the state).

3. Compensation or settlement (money payment that goes to the victim).
4. Community service or administration (required "volunteer" work for some charitable Organization or governmental body).
5. Probation (supervision by the government for a specified period of time in lieu of imprisonment , which can include court-order restrictions on behaviour such as no use of computers or required attendance at counselling sessions).
6. Confinement in prison (usually for a limited time, such as a couple of days to a year).
7. Confinement in prison (usually for a more extended time, ranging from a few months to life).
8. The death penalty (for the people who convicted murder).

- Criminal offenses are usually categorized in keeping with the seriousness of the crime and the severity of the penalty. These classifications can consist of the following, relying on the jurisdiction :
  1. **Violations :** The least critical offenses, for this penalty is only fine.
  2. **Misdemeanours :** It is serious than violations with a penalty and jail term.
  3. **Felonies :** It is a serious offense, which bring a penalty of imprisonment (in some jurisdictions death penalty for severe cases).

➜ 2 Civil Law

- The goal of civil law is to settle disagreements between persons or entities. In the civil law the style of the case usually consist of two private parties for example Rohit Deshmukh vs Swati Deshmukh or Atharv P vs. Kinda Corporation. Government organizations can be the parties to civil suit.
- Some terms related to civil law are :
  1. **Torts :** Civil wrongs.
  2. **Plaintiff :** The party who initiates the lawsuit.
  3. **Respondent/Defendant :** The person against who is the suit is brought.
- The losing party in a civil suit does not generally go to jail or prison unless also convicted of a criminal offense such as contempt of court. Instead, he or she is subject to one of two types of court orders :
  1. An order requiring that the respondent should pay the money for damage. The damages can include compensatory damages for the actual and expected losses

suffered by the plaintiff both tangible and intangible and punitive damages beyond the actual losses, made to punish the party who committed the wrong.

2. An injunction requiring that the respondent do some specified action or not do some specified action. For example, there can be an order to the party for to stop sending e-mail to the plaintiff. An injunction is a legally binding order, and ignoring it can result in criminal charges.

➜ 3 Administrative/Regulatory Law

- Administrative law is the third body of law, this body of law is often overlooked in discussions of criminal and civil law. It is also known as regulatory law. This body of law consists of rules and regulations that are approved by a governmental agency under authority given to it by the legislative body and that applies to a particular occupational field or governs a particular area of life.
- Examples are Environmental Protection Agency regulations as well as rules that govern the practice of medicine, law, engineering, and the like.
- Administrative laws are neither criminal nor civil yet have the power of law inside of their regions of purview. For instance, an administrative activity can be brought against a specialist or lawyer who disregards the state administrative organization's rules.
- In the event that discovered liable, the blamed individual may be rebuffed, fined, or have his then again her permit disavowed. (On the off chance that the recent happens, and the individual keeps on honing, criminal accusations of honing without a permit could be brought).
- Administrative activities are generally led by set out by law that are like those of a court, yet the committees or different bodies that hear the cases are not officers of the court. Thus the procedures are called **quasijudicial.**

7.1.1 Levels of Law

Q. 7.1.5 Explain the levels of law. *(Ref. Sec. 7.1.1)* **(5 Marks)**

The scope of law falls into one of the following level/category :

1. Local laws
2. State laws
3. Federal laws
4. International laws.

The processes of approving these laws are very similar; the differences are the legislative body that approves them, the executive officer who signs them, and the geographic jurisdiction within which they can be enforced.

➜ 1. Local Laws

- Local laws are approved by a city or town council or by a county commission, signed into law by the mayor or a county judge. Some cities and counties give the executive officer the power to veto laws; in others, the signing is a mere formality.
- Local laws are also known as *ordinances*. Cities and counties can approve ordinances to make certain acts criminal offenses, but generally only at the lowest levels.
- For example, in Texas a criminal offense under city law is a Class C misdemeanor, the lowest level of criminal offense. Local laws can be enforced only within the boundaries of the city or county that approves them.
- The People who violates the ordinances are tried in municipal or county courts. These courts often are not *courts of record* that are; no court reporter records the proceedings. A guilty verdict in these lower courts can be appealed to a higher court of record. Cities and counties could pass laws regarding computer and network usage, but this generally isn't done at the local level.

➜ 2. State Laws

- The laws enforced by police including municipal police and county sheriff's/judge's offices are *state laws*, passed by a state legislature and signed into law by the state's governor.
- Many states have a bicameral legislature patterned after the U.S. Congress, so the laws must be passed by both houses. In some states, the governor has veto power. States can pass criminal laws at all offense grades (misdemeanors and felonies), with penalties ranging from fines to the death penalty (in states that allow it).

➜ 3. Federal Laws

1. The U.S. Constitution grants all federal legislative powers to Congress, which comprises of two branches :

   (a) The Senate (b) House of Representatives.

2. Federal laws are introduced as bills in either the House or the Senate and are generally debated and amended in committee, where public hearings may be held to obtain citizen input, before being brought to the full body for a vote. After passage by one branch, the bill must go to the other. If changes are made there, it comes back to the originating body for approval, and it goes back and forth until agreement is reached.

3. Alternately, a gathering advisory group with individuals from both the House and Senate may be selected to determine the distinctions. Once a law has been gone by both bodies, it goes to the President, who can sign it, veto it, or let it go into law without mark. A presidential veto can be overridden by vote of 66% dominant part of both the House and Senate.
4. Federal criminal laws are upheld by the FBI and other requirement organizations that have practical experience specifically regions of law, for example, the Drug Enforcement Administration (DEA); the Bureau of Alcohol, Tobacco, and Firearms; and the Criminal Investigation Division of the Internal Revenue Service.
5. The FBI examines government cybercrime offenses, and the Computer Crime and Intellectual Property Section (CCIPS) of the Criminal Division of the Department of Justice gives lawful skill to elected prosecutors.
6. The national government doesn't have general police powers inside of the states. That is, the FBI can't capture individuals for infringement or violation of state laws.
7. The national/federal government has general criminal purview over U.S. areas that are not inside of state limits, for example, government land, U.S. regions, and the District of Columbia.

➜ 4 International Laws

Laws can likewise begin through settlements, which are agreement gone into between nations. For instance, Congress sanctioned the scandalous Digital Millennium Copyright Act (DMCA) in 1998 to actualize the World Intellectual Property Organization (WIPO) copyright arrangement finished up at Geneva, Switzerland, in 1996. WIPO is an office of the United Nations that has 179 part states.

7.1.2 Levels of Culpability : Intent, Knowledge, Recklessness, Negligence

Q. 7.1.6 Explain the levels of culpability. *(Ref. Sec. 7.1.2)* **(5 Marks)**

The U.S. criminal justice system is based on the principle of "A persons act does not make a him or her guilty of a crime unless his mind be also guilty." Or we can say, "In order to declare, the prosecution must prove not only that the accused committed the prohibited act but also that the accused possessed the culpable mental state at the time of the Offense.

Culpability means responsibility; most penal codes define the culpable mental states as follows :

1. Intent
2. Knowledge
3. Recklessness
4. Negligence

➜ **1. Intent**

- It is the planned yearning of the person to obtain the outcome of the act.
- For example, If a person sees a pedestrian crossing the road before him, sees that the person is his archrival whom he has long wished dead, and purposely aims the car at the pedestrian and accelerates, killing him , the mental state is *intentional* and the crime is murder or homicide.

➜ **2. Knowledge**

- The person is known that the act will result in the outcome. For example, Regardless of the possibility that he doesn't have the intent to kill, if the driver sees the person on pedestrian, just doesn't have a craving for backing off, and runs him over, the mental state is knowing.
- The crime is still murder in many jurisdictions in light of the fact that the murder statutes for the most part determine "intentionally or knowingly" as the required level of culpability for that offense.

➜ **3. Recklessness**

- The person is aware about a huge threat if he or she engages in the act; it will bring about the outcome.
- For example, If a man is driving a car much too quick for conditions, easily getting through stop signs and giving careful consideration to the street as he "bops to the tunes" on his auto stereo and in this manner he keeps running over a person on pedestrian at an crossing and kills him, the mental state is rash or reckless and the crime is homicide.

➜ **4. Negligence**

- The individual should have realized that there was a generous danger that on the off chance that he or she engaged in the act.

- For example, if a person's car brake are fail or not in good condition, has had them go out a few times yet keeps on continuing driving the car without having them altered, sees the person on pedestrian crossing the road before him and tries to stop however can't do as such and kills the pedestrian, the mental state is careless or negligent and the crime is criminally negligent murder.
- On the other hand, if a man is driving down the road, obeying the speed limit and traffic signs and generally taking care, and a walker all of a sudden darts into the street from between two stopped or parked cars directly into the way of the car and is hit and killed, there is no punishable mental state and there is no crime; the incident is a mishap or accident.

7.1.3 Level and Burden of Proof Criminal Versus Civil Cases

Q. 7.1.7 Write the difference between the criminal and the civil cases? *(Ref. Sec. 7.1.3)* **(5 Marks)**

Two important differences between criminal and civil law are the *level of proof* required to find a person legally accountable for an act and the side on which the *burden of proof* lies- that is, which side must prove its case to win at trial.

Criminal cases/law	Civil cases /laws
In a criminal case, the burden is on the prosecution to prove its case.	In civil case the burden is generally on the respondent who is accused of a civil wrong to prove that he or she isn't liable.
The level of proof required in criminal cases is very high.	The level of proof required is much lower than in a criminal trial.
Guilt must be proven *beyond a reasonable doubt.*	The party that proves its case by a *preponderance of the evidence* wins the case.
In criminal case it is important that all jurors must agree on the verdict.	In many civil cases, only a majority of the jurors must be convinced.

☛ **Vicarious Liability**

- Vicarious liability is the lawful responsibility that one person or entity has for someone else's actions. It is usually created by some sort of "oversight" relationship. That is, a person or entity that has oversight or control over another person can be held civilly liable for wrongs committed by that person.
- For example, a parent can be held liable for a child's acts, and an employer can be held responsible for an employee's acts. Thus if a hacker hacks company equipment and send child pornography, or commit other cybercrimes, the employing company could be sued for allowing it to happen.

Syllabus Topic : Information Technology Act

7.2 Information Technology Act

Q. 7.2.1 Write short note on Information Act ? *(Ref. Sec. 7.2)* **(5 Marks)**

Q. 7.2.2 What are the offences and the punishment in IT ACT 2000 ? *(Ref. Sec. 7.2)* **(5 Marks)**

Q. 7.2.3 Explain the sections and punishment of IT ACT *(Ref. Sec. 7.2)* **(5 Marks)**

- The Information Technology Act, 2000 or IT Act is an Act of the Indian Parliament (No 21 of 2000) reported on 17 October 2000. It is the most important law in India dealing with cybercrime and E- commerce. The IT Act is based on the United Nations Model Law on Electronic Commerce 1996 (UNCITRAL Model) suggested by the General Assembly of United Nations by a resolution dated 30 January 1997.
- The Government of India act out the Information Technology (I.T.) Act with some main objectives to carry and ease lawful electronic, digital, and online transactions, and alleviate cyber-crimes.
- The IT Act have **13 chapters** and **90 sections.** The last four sections that is sections 91 - 94 in the IT Act 2000 deals with the revisions to the Indian Penal Code 1860, The Indian Evidence Act 1872, The Bankers' Books Evidence Act 1891 and the Reserve Bank of India Act 1934 were deleted.
- Chapter 1 has Preliminary aspect that deals with the short, title, extent, commencement and application of the Act in Section 1. Section 2 give Definition.
- Chapter 2 deals with digital signatures, electronic signatures and record etc. and Chapter 11 deals with offences and penalties. A list of offences has been given along with punishment in this part of The Act. Then after that provisions about due carefulness, role of mediators and some miscellaneous provisions are been declared.
- There are 2 schedules given in the act. The First Schedule deals with Documents to which the Act shall not apply. The Second Schedule deals with electronic signature or electronic authentication method. The Third and Fourth Schedule are omitted.

The offences and the punishments in IT ACT 2000

The Offences and Punishment comes under the Information Act, 2000 are as follows:

1. Tampering with the computer source documents.
2. Directions of Controller to a subscriber to extend facilities to decrypt information.

3. Publishing of information which is obscene in electronic form.
4. Power to investigate offences.
5. Penalty for breach of confidentiality and privacy.
6. Hacking with computer system.
7. Penalty for publishing Digital Signature Certificate false in certain particulars.
8. Penalty for misrepresentation.
9. Protected system.
10. Confiscation.
11. Penalties or confiscation not to interfere with other punishments.
12. Act to apply for offence or contravention committed outside India.
13. Publication for fraudulent purpose.
14. Power of Controller to give directions.

The following table shows the punishments of the IT Act :

Section	Punishment
Section 43	This section of IT Act states any act of destroying, altering or stealing computer system/network or deleting information with act of damaging data or information without authorization of owner of that computer is liable for payment to be made to owner as compensation for damages.
Section 43A	This Section of IT Act states any corporate body dealing with sensitive information and negligent with implementing reasonable security practices causing loss or wrongful gain to any other person will also be liable as convict for compensation to the affected party.
Section 66	This Section states hacking of computer system by individual with dishonesty or fraudulently with 3 yrs. imprisonment with fine of Rs. 5,00,000 or both.
Section 66A	This Section states any offensive information with demean character or information known as false but sent for purpose.
Section 66 B,C,D	This Section is for fraudulently or dishonesty using or transmitting information or Identity theft is punishable with 3 yr imprisonment or 1,00,000 fine or both.

Section	Punishment
Section 66 E	This Section is for Violation of privacy by transmitting image of private area is punishable with 3 yr imprisonment or 2,00,000 fine or both.
Section 66 F	This Section is on Cyber Terrorism affecting unity, integrity security, sovereignty of India through digital medium is liable for life imprisonment.
Section 67	This section states publishing obscene information or pornography or transmitting obscene information in public is liable for imprisonment up to 5 years or penalty of Rs. 10,00,000 or both.

Syllabus Topic : Giving Evidence in court

7.3 Giving Evidence in Court

Q. 7.3.1 Explain giving evidence in court. *(Ref. Sec. 7.3)* **(5 Marks)**

In the court the digital investigators are usually asked to testify or produce a written summary of their findings in the form of an affidavit or expert report. Testifying/writing a report is most important stage of the investigative process because, if findings are not communicated clearly in writing, others cannot understand or use them. Expert report is presented in the court.

7.3.1 Testifying in a Cybercrime Case

- The whole examination and working of the case record is pointed toward one final product getting a conviction of the cybercriminal in a court of law.
- Regardless of how great the evidence you acquire log documents demonstrating unapproved access to the system, hard disks seized from the presumes PC containing obvious signs of the criminal movement, organize records following the interloper back through Internet servers to his or her PC none of this evidence can remain solitary.
- Under most criminal justice systems, physical and intangible evidence must be bolstered by testimony. Somebody must testify with respect to when, where, and how the evidence was acquired and confirm that it is a similar when it is introduced in court as it was the point at which it was gathered.

- At the point when evidence is technical in nature and troublesome for laypersons to understand, specialists might be required to testify to explain the nature of the evidence and what it intends to the jury and judge. Police specialists and IT work force may both be required to take the witness stand in a cybercrime case.
- In the accompanying segments, we examine the criminal trial process, the two kinds of witnesses that can be called to testify in criminal activities, and a few hints on the most proficient method to get ready for and give testimony as either an evidentiary or a specialist witness.

7.3.2 The Trial Process

Q. 7.3.2 Write short note on trial process? *(Ref. Sec. 7.3.2)* **(5 Marks)**

- The trial process really starts when a suspect is arrested or a warrant is issued for a presumes arrest. After the arrest, the respondent is taken under the steady gaze of a justice (a judge or, now and again, the mayor of a city or town) inside a predetermined time period more often than not inside 48 hours and charged.
- This allegation is a casual process whereby the justice tells the litigant what charges have been documented against him or her, Mirandizes the respondent, and sets or denies bail. A primary hearing normally happens inside a couple of days. In this hearing, the prosecution must present enough evidence to persuade the judge that the litigant/defendant ought to go to trial.
- In a few cases, the litigant goes before a grand jury rather than a judge. This is a mystery continuing in which the grand jury chooses whether to hand down a prosecution. Next, a formal allegation might be held, at which the respondent can enter a request for the charges against him or her. Prior to the real trial, there is generally a pretrial gathering or hearing at which motions can be documented (for instance, requesting for a change of venue). At last, the case goes to trial.
- In the event that the respondent /defendant pleads not guilty to the charge, a jury is chosen through the examiner desperate process, amid which each side gets the chance to question potential members of the jury and strike, or exclude, a certain number.
- The judge instructs the jury on the relevant law, and after that, the lawyers each gives an opening explanation. Since the burden of proof is on the indictment, the prosecuting lawyer gets the opportunity to call witnesses. The prosecution asks question to each of the witnesses; this process is called direct examination.
- At that point, the defense lawyer is permitted to question the witness about the issues that were raised amid direct examination.

- Afterward, the prosecution can divert, after which the defense can recross. This process happens with each witness until both lawyers are done questioning that witness.
- At the point when the prosecution has presented every one of its witnesses and evidence, the defense lawyer, as a rule, makes a motion to expel the case because of the absence of the motion is granted, the trial is finished and the defendant goes free.
- If not, the defense presents its case, calling witnesses to testify. These witnesses are cross-examined by the prosecutor, and so on, in the same manner as the prosecution witnesses. After the defense has exhibited its case, the prosecution is permitted to call rejoinder witnesses, and the defense can disprove those witnesses.
- At long last, when every one of the rejoinders is done, the lawyers put forth their closing statements (which side goes first relies upon the court) and the judge gives more guidelines to the members of the jury, who are then conveyed to achieve a decision.
- A specialist or IT professional testifying as to individual learning of the evidence for the situation (an evidentiary witness) be testifying as a prosecution witness and in this manner will be directly examined by the examiner and prosecutor and cross-examined by defense lawyer. Expert witnesses may testify for either side.

7.3.3 Testifying as an Evidentiary Witness

Q. 7.3.3 Explain Testifying as an Evidentiary Witness and Testifying as an Expert Witness? *(Ref. Secs. 7.3.3 and 7.3.4)* **(5 Marks)**

- An evidentiary witness has direct knowledge of the case. such as, a network administrator might be called to testify, to tell what he/she observed during an attack on the network, or an investigator may be testified as to the evidence that he/ she observed on a computer that was seized pursuant to a search warrant.
- An evidentiary witness can only testify as to details (what he / she saw or heard) but cannot provide opinions or draw conclusions.

7.3.4 Testifying as an Expert Witness

Q. 7.3.4 Explain Testifying as an Evidentiary Witness and Testifying as an Expert Witness? *(Ref. Secs. 7.3.3 and 7.3.4)* **(5 Marks)**

- There is no direct involvement of an expert in the case but has expertise or special technical knowledge that qualifies him/her to provide professional opinions on technical issues.
- Some time the expert witness prepares the report, he/she outlines their opinion and give reasons for every opinion. In a few countries, expert witnesses are registered as experts in a particular field.

7.3.5 Qualifying as an Expert

Q. 7.3.5 Explain Qualifying as an Expert and Employing Experts ? *(Ref. Secs. 7.3.5 and 7.3.6)* **(5 Marks)**

- The lawyer asks number of questions to the expert witness, these questions are designed to demonstrate the person's credentials as an expert. The questions might be :
  - What degrees do you have?
  - What positions have you held in the field?
  - What courses have you taught in this field?
  - What books or papers have you written pertaining to the field?
  - What is your past experience as an expert witness in this field?
- The opposing lawyer may challenge the expert witness's credentials to try to have the expert's testimony thrown out.

7.3.6 Employing Experts

Q. 7.3.6 Explain Qualifying as an Expert and Employing Experts ? *(Ref. Secs. 7.3.5 and 7.3.6)* **(5 Marks)**

- In few cases, expert witnesses are paid to testify. Payment is as a rule on a routine set of expenses basis and may incorporate travel costs and lodging amid the trial.
- Numerous individuals contract themselves out as expert witnesses, gaining practical experience in a wide range of technical or logical fields, including computer forensics. Numerous such expert witnesses promote their services on the Internet.

7.3.7 Giving Direct Testimony

Q. 7.3.7 Explain giving direct testimony ? *(Ref. Sec. 7.3.7)* **(5 Marks)**

Direct testimony's first rule is always telling the truth and do not scared to say "I don't remember" or "I don't know". There are many ways for testifying in court. In the event that you are a law enforcement officer or technical expert required to testify in court, keep in mind that the jury will assess the credibility of each witness and choose whether to trust the testimony dependent on that assessment.

Here are some approaches to upgrade your credibility as a witness :

- **Be on time or slightly early for court :** This permits you an opportunity to get ready and investigate the layout of the courtroom, the course you'll stroll from your seat in the