

nrhitoula@gmail.com

- Reading note hand written
- report on NEC & NEA
- Case studies at least 3.
- List of government of concern with engineering profession

Case studies related to practice of engineering profession

1. Public safety, industrialization, and protection of environment
2. conflict of interest, personal integrity, and personal privacy
3. professional negligence (duty, breach, proximate cause and damage)
4. breach of duty, criminal law and tort
5. breach of NEC code of conduct
6. breach of Public Procurement Act and Public Procurement Regulation
7. breach of intellectual property rights and copyrights
8. abuse of position and authority

- **Kathmandu, August 17, 2016**

Some slum areas on the banks of the Bagmati River and Dhobikhola were inundated in Kathmandu after torrential rainfall yesterday night and in the wee hours this morning. The slum dwellers were panic-stricken as the swollen rivers entered their settlements. Some vacated their shanties in search of safer places while others spent the night salvaging their belongings. , 45, residing in the slum area for that past 15 years said they had not faced such a situation in the past, but this time they were left high and dry after the river entered the slum area in Bijulibazaar at midnight. He blamed the disaster on causeways made in different areas along the Bagmati River with huge huge pipes to widen the roads. He demanded removal of the causeways. The slum dwellers were busy clearing waterlogged houses today. The flood had damaged the causeway in Dhobikhola, Bijulibazaar. The slums in Bhimsengola and Shantinagar on the banks of the Bagmati River and in Bijulibazaar on the banks of Dhobikhola were worst affected by rainfall. The 24-hour rainfall in Kathmandu till 8:45am was 67.0 mm, according to Meteorological Forecasting Division.

- **Discuss the situation**

- [issues of flood in river.docx](#)



- **Determine the facts in the situation**
- **Determine the stake holders**
- **Assess the motivation of the stakeholders**
- **Formulate the alternative solutions**
- **Seek additional assistance as appropriate**
- **Select the most appropriate course of action**
- **Implemented the selected resolution**

- Public safety, industrialization, and protection of environment
- During quality control visit in a remote village, it has been found that a building is being constructed on the bank of a river and it will be damaged due to flood. Approximately 25% of the construction was completed. The survey was done by your friend with the consent of the local people. However, the quality of construction was as per the specification. Your job is limited to control the quality of building only. Discuss the case and recommend your views on whether to continue the construction or not.

- A client came to a designer and asked to design a multistoried building. The soil type of the proposed site was found not suitable for that type of structure. The designer hesitated to design the building. The client said that he actually was not going to build that structure. He wanted to collect money from outside sources showing that designed as a proposal for his venture and wanted to utilize that money in other business. Explain the roles of the client and the designer in the perspective of professional ethics.

Regulatory Environment

- **Regulatory Environment [5 hours]**
 - **Nepal Engineering Council Act**
 - **Labor Law**
 - **Intellectual Property Right**
 - **Building Codes and Bylaws**
 - **Company Registration**

Personal privacy and large commercial data base

- Impact of computer on society
- Social application: Solve human/ social problem such as
 - Medical diagnosis
 - Computer assisted instruction
 - Government program planning
 - Environmental quality control
 - Law enforcement
- Employment and productivity:
 - Increase in employment and productivity
 - Reduction in some type of job
- Impact on competition:
 - Allows large organisation to become more efficient or gain strategic competitive advantage
 - Small firms are driven out

Personal privacy and large commercial data base

Impact of computer

- Impact on individuality:
 - Reduce human relationship
 - Inflexible.
- Impact on quality of life:
 - Production of better quality goods/services at low costs/effort/time
 - Increase in leisure time
 - Eliminated monotonous tasks (upgraded quality of life)
- Impact on privacy:
 - Collect, store, integrate, interchange and retrieve-easy.
 - Lost privacy

Personal privacy and large commercial data base

Computer/ cyber crime

- Crime in general behaviour that are forbidden under the law
- Subjected to punishment
- Computer crimes are range from the catastrophic (disastrous) to the merely annoying (irritating).
- The computer as a target - attacking the computers of others (spreading viruses is an example).
- The computer as a weapon - using a computer to commit "traditional crime" that we see in the physical world (such as fraud or illegal gambling).
- The computer as an accessory - using a computer as a "fancy filing cabinet" to store illegal or stolen information.

Personal privacy and large commercial data base

➤ Computer/ cyber crime

- Spam (*Unsolicited bulk email*)
- Fraud (hoax, racket)
- Obscene or offensive content
- Harassment
- Threats
- Drug trafficking
- Cyber terrorism
- Cyber warfare

Personal privacy and large commercial data base

➤ **Computer/ cyber crime**

- (1) crimes that target computers directly;
 - Computer viruses
 - Denial-of-service attacks
 - Malware (malicious code)
- (2) crimes facilitated by computer networks or devices, the primary target of which is independent of the computer network or device.
 - Cyber stalking
 - Fraud and identity theft
 - Information warfare
 - Phishing scam (cheat)

Personal privacy and large commercial data base

- **Electronics Transaction ACT 2063/2004**[Electronic Transaction Act 2008 ENGLISH.pdf](#)
 - Theft, damage or alternation of computer source code
 - Unauthorized access to materials on computer
 - Destruction to computer and information system
 - Publication of illegal material on electronic form
 - Violation of confidentiality
 - False information
 - Submitting or showing forgery license or certificate
 - Non submission of the documents or other materials
 - Computer fraud

Preamble of Electronic Transaction Act 2008

it is expedient to make, legal provisions for authentication and regularization of the recognition, validity, integrity and reliability of generation, production, processing, storage, communication and transmission system of electronic records by making the transactions to be carried out by means of electronic data exchange or by any other means of electronic communications, reliable and secured; And where as, for controlling the acts of unauthorized use of electronic records or of making alteration in such records through the illegal manner,

Now, therefore, be it enacted by the House of Representatives in the First Year of the issuance of the Proclamation of the House of representatives, 2063(2007) .

need of act

CAUSE FOR ELECTRONIC TRANSACTION ACT (BACKGROUND)

In Nepal, organization, business houses started using the electronic transactions when the government was lacking the law, rules and regulations.

Cyber law

ELECTRONIC TRANSACTION ACT AS CYBER LAW IN TO EFFECT

- A cyber crime (electronic transaction) legislation committee has on February 4, 2004 presented an ordinance to House of Representatives.
- The House of Representatives has on March 4, 2004, made a recommendation for an Act amending the Penal Code and the ratification and was first enacted as an ordinance. And It was enacted as an act on 2006 and entered into force.

Purpose of cyber law

MAIN PURPOSE OF THE CYBER LAW

The main purpose of this act (law) is to legalize the electronic transactions and digital signatures for both private and public transactions, protecting the electronic documents from the unauthorized access and to control the illegal activities or the cyber crimes. This act has 12 sections and 79 clauses. Electronic Transaction Act 2006 is here to fore addressed in the capacity of cyber law.

What is cyber crime ?

Theft of computer source code, unauthorized access, destructing the computer and computer system, illegal publication, violation of privacy, providing wrong information, compute fraud etc are known as computer (cyber) crime.

For side of act

This act has encouraged the use of information technology for business houses and other offices. Especially for the banks, that start the electronic transactions such as internet banking, SMS banking, Tele banking, ATMs, Credit Cards, Debit Cards effective delivery service etc.

Complain history?

- Many threat and extortion e-mails
- Many renowned companies received spam mails from proxy hot mails, yahoo, G-mail demanding money on the name of mainly insurgents groups and so called armed groups.
- Hacking of newspaper's website by replacing the original content with threat to attack.
- mutilation girl image and pasted on the porno site
- Copy  of intellectual properties

Types cyber crime

- Black mailing
- E-mail Threats
- Computer Fraud
- Trafficking
- Digital Piracy
- Counterfeiting
- Hacking
- Internet use to cause public disturbance
- Identity theft and invasion of privacy
- Internet fraud
- ATM fraud
- Wire Fraud
- Networking business fraud
- Internet Porno
- Creating Computer viruses
- Sabotage and denial of e-service (Trojan Horse)
- Hijacking of government and corporation web sites
- Theft of intellectual property
- Online abuses

What is problem in implement?

The problem facing us today is the rapid progress of technology which has found its way around existing social control systems and allowed individuals to do as they please with this technology. The law and the government are struggling to catch up but we feel that it is also important to bring the common man into the fight against cyber crime.

Building codes and by laws

- Building act 2055 (1998)
- Building rules 2062 (2005)
- National building codes 2060 (2003)
 - ☐ International state of art
 - ☐ Professionally engineered building > 100 sq feet
 - ☐ Mandatory rules of thumb
 - ☐ Guidelines for remote rural building
 - ☐ Retrofitting and others
- ☐ implementing agency DUDBC< Municipalities etc

Building codes and by laws

N B C	Description
101	Material Specification
102	Unit weight of material
103	Occupancy load
104	Wind load
105	Seismic design of building in nepal
106	Snow load
107	Fire saFety
108	Site consideration
109	Masonry unreinforced

N B C	Description
110	Plain and reinforcement concrete
111	Steel
112	Timber
113	Aluminum
114	Construction safety
206	Architectural design
207	Electrical design requirement (for public building)
208	Sanitary and plumbing design requirement
	NBC207 electricity.pdf

Documents required for Company Registration in Nepal

- A company registration procedure needs some finance to be paid along with the amount of time required for the registration process.
- The registration fee differs for a private company and a public company.
- There is certain distinction between a private and a public company.
- The companies that generate money by public participation are public companies and those companies which are run by the owner without the permission to have public participation in purchase of shares are private companies.
- Private companies are not permitted to have stock flow for the public.
- The differences between private and public companies based on the distinctions are mentioned below:

Types of Companies in Nepal

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Before registering a company you have to decide what kind of company is suitable for your business needs.

- Currently, three types of companies can be established in Nepal according to the Companies Act 2006 (2063 B.S.). They are :-
- Private limited company - requires only one shareholder or promoter
- Public limited company - requires at least seven shareholders and promoters
- Non-profit company - requires at least five members
- A minimum paid up capital of 10 Million Nepalese Rupees is required to register a public limited company.
- Private company does not have any minimum capital requirements.
- A non-profit company does not have shareholders, it only has members and does not require any form of minimum capital.

S.N.	Basis of Difference	Public Company	Private Company
1.	Minimum paid-up Capital	Rs. 1,00,000	No minimum paid-up capital prescribed
2.	Number of Members	7 to any number of members	1 to 50 members
3.	Transfer of share or securities	Shares and securities are freely transferrable	Shares and securities can only be transferred to the existing shareholders of the company
4.	Number of Board of Directors	3 to 11	Any number of Directors
5.	Presence of Company Secretary	Mandatory	Optional
6.	General Assembly	Mandatory	In accordance with the Articles

Company registration

- 1. Memorandum of association of proposed company**
- 2. Articles of association of proposed company**
- 3. Copy of the agreement such as Joint Venture Agreement or Memorandum of Understanding (if any)**
- 4. Approval license if a company is intending to operate a business regulated under Industrial Business Act**
- 5. Incorporation decision of its board of directors and other major documents if the promoter is a company**
- 6. Approval under the Foreign Investment and Technology Transfer Act if the promoter is a foreign national or foreign company**
- 7. In addition**
- 8. Powers of Attorney are required if promoters want to send a representative rather than appear in the Office of the Companies Registrar themselves.**

- **Conflict theory**
- Conflict theory was developed by Karl Marx and has been modified and developed by later sociologists. Conflict theory of social change holds that many changes are caused by tensions between competing interests in the society. Conflict theorists regard conflict as inevitable and normal process. This theory assumes that the existing social conditions always contain the seeds of new social change. Based on the condition of economic production, the form of society is defined as: primitive socialist, slave, feudal, capitalist, socialist and finally communist society.