IQRA National University, Peshawar
Department of Electrical Engineering

Final – Term Examination Fall-2020
Date: 24/08/2020

Course Code:	HMEE3133		**Course Title:**	Professional Ethics	
Prerequisite:			**Instructor:**	Ahmad Hassan	
Module:		**Program:** BEE	**Total Marks:** 30	**Time Allowed:**	240 minutes

Name   Hamza
ID   16469

Note: Attempt all questions.

Q1	What is the difference between ethics and Legality? Explain with example.	Marks [5+5]
Q2	What are moral values in an Engineering environment? Give an example.	Marks [10]
Q3	Why should we study professional Ethics as engineers? Write a short note.	Marks [10]

Q1

Legal standards are based on written **law**, while **ethical** standards are based on human rights and wrongs. Something can be **legal** but not **ethical**. The difference between them are well explain in the below comparison chart

BASIS FOR COMPARISON	Legality	Ethics
Meaning	The legality refers to a systematic body of rules that governs the whole society and the actions of its individual members	Ethics is a branch of moral philosophy that guides people about the basic human conduct.
What is it?	Set of rules and regulation	Set of guidelines
Governed By	Government	Individual, legal and professional norms
Expression	Expressed and published in writing.	They are abstract.
Violation	Violation of law is not permissible which may result in punishment like imprisonment or fine or both.	There is no punishment for violation of ethics.
Objective	Law is created with an intent to maintain social order and peace in the society and provide protection to all the citizens	Ethics are made to help people to decide what Is wrong and how to act.
Binding	Legality has a legal binding	Ethics do not have a binding nature.

Legality means an act is in accordance with the law. Ethics is about concepts of right and wrong behavior. Some actions may be legal but in some people's opinion not ethical. For example, testing medicines on animals is legal in many countries but some people believe it is not ethical.

In determining what is a legal act or an ethical act, the bases are also different. A legal act is an act that meets the terms of rules and regulations of a particular but massive and collective entity, like a society or a country. Ethical acts, on the other hand, are compliant with the principles or justifications of an individual or a small and specific organization.

Example:

testing medicines on animals is legal in many countries but some people believe it is not ethical.
The best example of ethical but illegal I can thick of would be actions such as those by rosa parks, martin luther king, jr and other who engage in acts of civil disobedience against unjust laws. For example, refusing to sit at the back of a bus or being refused service at a white only counter. Unethical but not illegal. Firing an employee without notice for no good reason. Lying to your boss to get off form work. Cheating on spouse is legal but unethical. Using drugs is ethical but illegal.

Q2

MORAL VALUES IN AN INDUSTRY AS AN ENGINEER

There are three main Moral values in an industry, which an engineer is always obliged to obey, & these values not only helps the industry but also benefits equally an Engineer's personal gain. These three main points are:

1. Professional Duties
2. Ethical Values
3. Human Values

- An Engineer's good conduct (as captured in professional codes of conduct) toward other engineers, toward employers, toward clients, and toward the public is an essential part of the life of a professional engineer while remaining in the industry.
- As professionals, engineers need to internalize their codes and to realize that they have a personal stake in the application of codes as well as the process of developing the codes
- As professionals, engineers should try their best to solve every problem. i.e. If a problem situation is related to other engineer field, an engineer should know at least the know-how to solve that problem.
- Engineers should always respect their field rules as per their field's literature.
- In industry, an Engineer is responsible to think about the interaction of technology and society, because engineers are the ones who create all of technology.
- In industry, the central focus of an engineer's profession must be on the application of scientific knowledge and creative thinking to meet societal needs.
- Engineers must bring both the industry name and his profession to the equal level so that there will not be any defaming situation created in any of both cases.
- In an industry, the purpose of the scientist is to know things, while that of the engineer is to perform on things and invent. The scientist enhances to the stock of confirmed, organized information of the corporal realm while an engineer fetches this information to stand on real-world problems.
- In an industry, an engineer is not allowed to choose the problem that comforts him; he must resolve problems as they arise.
- A solution to the given problem by an engineer in an industry must be reliable, cheap and most importantly safe.
- An engineer should keep paramount the safety, health and welfare of the public.
- An engineer should always avoid any type deceiving acts.
- An engineer should do amenities only in the zones of their capability.
- Engineers should shoulder projects lonely when qualified by schooling or knowledge in the precise technical fields involved.
- As a professional engineer, he must turn for each employer or customer as faithful agents or representatives.
- Engineers must conduct themselves morally, dutifully, morally, and legally so as to improve the integrity, standing, and practicality of the occupation.
- Engineers should support only those engineering forms that are in conformism with appropriate standards.
- Engineers may show openly practical thoughts that are established upon facts and competency in the topic matter.
- Engineers should not assist or support the illegal exercise of engineering by an individual or firm.
- "Time is money"-that well-known proverb must be every engineer's priority working in an industry.
- An engineer should have human moral awareness (skills in knowing moral glitches in engineering)
- Forceful moral perceptive (understanding, measuring dissimilar views)
- An engineer should always keep in the view about the effects on the human health caused due to the industries.

- An engineer should pay his complete attention to his work especially when working on forums related to human moral values.
- An engineer must use moral message, to show and upkeep one's technical opinions to others.
- Moral sensibleness i.e., eager and talented to be ethically & technically responsible for human lives.
- An engineer must respect for people, which shows apprehension for the well-being of humankind.
- While proposing an idea to an industry, an engineer must keep in mind that his/her project is eco-friendly, that in turn is ultimately beneficial for the mankind.
- An engineer must keep moral confidence i.e., trust in using lucid discussion for undertaking ethical engagements.
- Honesty, which incomes moral truthfulness, and assimilating one's proficient life and individual beliefs.

Q3

Ethics are the principles accepted by the society, which also equate to the moral standards of human beings. An engineer with ethics, can help the society in a better way. Hence the study of professional ethics, where such ethics are implemented in engineering by the engineers, is necessary for the good of the society.

Study of ethics helps engineers develop a moral autonomy. Ability to think critically and independently about moral issues. Ability to apply this moral thinking to situations that arise in the course of professional engineering practice.

1. **Moral awareness:** Proficiency in recognizing moral problems and issues in engineering
2. **Cogent moral reasoning:** Comprehending, clarifying, and assessing arguments on opposing sides of moral issues
3. **Moral coherence:** Forming consistent and comprehensive viewpoints based on consideration of relevant facts
4. **Moral imagination:** Discerning alternative responses to moral issues and finding creative solutions for practical difficulties.
5. **Moral communication**: Precision in the use of a common ethical language, a skill needed to express and support one's moral views adequately to others These are the direct goals in college courses. They center on cognitive skills—skills of the intellect in thinking clearly and cogently. It is possible, however, to have these skills and yet not act in morally responsible ways. Should we therefore add to our list of goals the following goals that specify aspects of moral commitment and responsible conduct?
6. **Moral reasonableness:** The willingness and ability to be morally reasonable
7. **Respect for persons:** Genuine concern for the well-being of others as well as oneself
8. **Tolerance of diversity:** Within a broad range, respect for ethnic and religious differences and acceptance of reasonable differences in moral perspectives
9. **Moral hope:** Enriched appreciation of the possibilities of using rational dialogue in resolving moral conflicts
10. **Integrity:** Maintaining moral integrity and integrating one's professional life and personal convictions