MORALS, VALUES, ETHICS AND INTEGRITY
MORALITY

• Concerns with right and wrong in human behavior mostly based on one’s conscience and guided by values rather than legalities or custom.
• A thought, word or deed is considered morally good if it agrees with the general perception of what is right and what is wrong.
• It is looked upon as something basic and perceptive in nature.
• eg: Lying for selfish ends is looked upon as immoral and is considered a flaw in character.
Moral Absolutism

• It is the belief that the criteria for determining what is morally right or wrong are universal.
• According to this belief, moral rules for given situations can be applied to everyone across borders and cultures.
• It also takes the view that certain acts are immoral regardless of their consequences or the circumstances that prompted them in the first place.
Arguments against moral absolutism

• Circumstances that prompt an act not considered
  Eg: a poor child stealing bread out of hunger will be considered immoral
• Consequences of an act not taken into account.
  Eg: lying to save an innocent life will be viewed as immoral
• Cultural diversity and tradition not taken into account.
  Eg: some acts are good in certain culture and bad in certain others
Moral Relativism

• It is the idea of allowing for different set of moral rules applied for different cultures and demographic groups.
• What is considered good among some people may not be acceptable to other groups.
• What was considered morally right a couple of centuries ago may be unacceptable now
Arguments against moral relativism

• Has an in-built flexibility that can defeat its very purpose.
• No clear standard with which different moral perspectives can be judged.
• The arguments that morality is relative with respect to culture can be extended to the view that morality is relative to each individual.
• The ethic /cultural/social groupings tend to arbitrary.
VALUES

• A value is an enduring belief that influences our choices in life to promote well – being.
• Values are principles that reflect one’s judgment of what is important in life.
• Ethical values are morally concerned with what is morally right.
• Not all values are ethical values
• Eg: efficiency, competence, self reliance, confidence, innovation etc are not ethical in nature
Ethical Values

- Honesty
- Integrity
- Services
- Sharing
- Caring
- Empathy
MASLOW’S NEED HIERARCHY

- Physiological needs: food, water, warmth, rest
- Safety needs: security, safety
- Belongingness and love needs: intimate relationships, friends
- Esteem needs: prestige and feeling of accomplishment
- Self-actualization: achieving one’s full potential, including creative activities
ETHICS

• Ethics is the set codes or moral principles with which behavior and belief are evaluated as right or wrong.
• Ethics provides well-defined standard that tell people how to act and respond in situations in which they find themselves in.
• Ethics is an enquiry into existing situations and offering of solutions aiming for the greater good of all concerned.
• Ethics is based on reason and logic.
• Ethics are specific moral codes.
WORK ETHICS

• Work ethics can be defined as a set of standards of behavior or codes of conduct based on a set of values in the workplace.
• Eg: medical ethics, military ethics etc
• A strong set of ethics promotes the well being of employees, organizational effectiveness as well as advancement of society
The basic elements of a well-formed code of work ethics in an organization are:

1. **INTEGRITY AND LOYALTY**
   
   Integrity at work place means the quality of being honest and morally upright, always willing to do right thing reliably and adhering to company’s code of ethics, policies and procedures.

2. **PROFESSIONALISM**

   Competence, good judgments and polite behavior of a trained man who can deliver the same good quality each time, irrespective of how he feels, are combinedly referred to as professionalism.

3. **RESPECT AND CARE**

   Recognizing the uniqueness of each individual and appreciating the differences. Caring is showing genuine compassion and concern for others helping them when needed, being kind, considerate and grateful.
4. COOPERATION

Achieving the organizational objectives through coordination of individuals tasks.

5. FAIRNESS

Sense of justice

6. TRUSTWORTHINESS

It is the extent to which someone’s actions can be relied on in the absence of control
INTEGRITY

• Integrity is a character trait that reflects a person's degree of honesty, adherence to moral principles and a complete harmony of one's thought, speech and action.

• A person with integrity will be guided by a moral compass and possesses consistency in character.

• People with integrity will be held in high esteem and others look up to them for guidance and leadership.

• Integrity is forfeit if a person does something that should not be done or refrains from doing something that should be done, for personal advantage.
Professional integrity

• Willingness to so the right thing in one’s profession.

• Eg: govt officials who make decisions out of favourism are against the ethics of their profession.

• Medical practitioners who prescribe drugs to patients who do not need them in order to favour drug companies are said to be lacking in integrity.
Political integrity

- Politicians are holders of elected office and are expected to have high integrity.
- Politicians who have tall claims about certain beliefs and act in a way that contradicts those beliefs lack in integrity.
Academic integrity

• Any academic endeavor must be devoid of plagiarism and false information.
• People of academic community are expected to stick to truthful measures of human progress and therefore likely to have long term ramifications.
Integrity in daily transactions

• As a responsible member of society we should always do what is right regardless of our take on it.
• A cab driver who returns a wallet forgotten by the traveler, a person who pays his tax without manipulating his income statement - all display integrity
Service-learning

- Multifaceted teaching and learning process.
- Students use academic knowledge and skills to address genuine community needs.
- An incredibly flexible tool, easily adapted to different age levels, community needs, and curricular goals.
- Example: Volunteerism, Community Service, Internships, Field Education.
- The purpose: equally benefit the provider and the recipient of the service as well as to ensure equal focus on both the service being provided and the learning that is occurring."
Learning

• Different ways of learning that makes service-learning effective to those serving as well as those being served are:
  • **Interpersonal learning** - students re-evaluate personal values and motivations.
  • Done by channelling a passionate interest to service-learning projects
  • Build a connection and commitment to the community.
  • **Academic material** - taught through practical application and reflective instruction.
  • Practiced outside classrooms and test-taking.
• **Cognitive Development** - Students are challenged to use critical thinking and problem solving skills in a context.

• **Transformation Within The Students** - Thinking about things in a new way and moving in new direction.

• Creating a new picture without relying on the old lines.
• Effective Citizenship And Behavioural Issues- Helps the students better understand social issues relevant to their own community
Service

- The Service in Service Learning takes knowledge outside the classroom into the real world with real people and situations.
- Service brings community together as a whole, towards a common goal or purpose.
- The action of service in and among the community, provides chances for sociocultural norms and prejudices to be removed.
- Students need to have a positive connection with the establishment they're serving in order to maximize their learning.
Factors

- Factors which influence its impact on students are: Placement Quality, Duration, Reflection.
Placement Quality

**Extent that students**

- have important levels of responsibility
- are active rather than observers
- do a variety of tasks
- receive appreciation from supervisors in the field.
Duration

• Needs to be of a long enough duration to have a developmental impact.

• Should spend at least fifteen to nineteen hours in their service activities to have adequate exposure to the people and issues their service addresses.
Reflection

• Period of critical thinking performed by the student.

• "core component" of service-learning (According to the National Service Learning Clearinghouse).

• Reflection may be done individually or as a group activity.
Effects

• **Effects on the Student**- developing interpersonal and personal leadership skills.
• develop a sense of meaning and purpose in their academics.
• **Diversity awareness**- students to experience different cultures.
• Reduces many negative and unnecessary stereotypes derived by inexperienced students.
• **Personal and academic gain** - Provide them with skills that would be beneficial in their planned career.

• The quality of learning will be different from what learned from simply reading books and listening to lectures.
Comprehensive Action Plan for Service Learning (CAPSL)

• Identifies four constituencies on which a program for service learning needs to focus its principal activities: institution, faculty, students, and community.

• Also identifies a sequence of activities to be pursued for each of the four constituencies.

• Provide a heuristic for guiding the development of a service learning program in higher education.
• Advantages: it is general enough that the execution of each cell can be tailored to local conditions.

• Disadvantages: it is not possible to detail how each step can be successfully accomplished to take the sequence of activities from the whole CAPSL model and apply it to any cell in the matrix.
Civic Virtue

• Standard of righteous behaviour in relationship to a citizen's involvement in society.
• Helps people understand their ties to the community and their responsibilities within it.
• An individual may exhibit civic virtue by voting, volunteering, organizing a book group, or attending a PTA meeting.
• It is the moral underpinning of how a citizen relates to society.

• Without an understanding of civic virtue, citizens are less likely to help others in the community, to volunteer their time, to give money to non profit organizations, or to participate in a group that benefits society
• In political philosophy, it is the personal qualities associated with the effective functioning of the civil and political order, or the preservation of its values and principles.

• Aristotle argued that civic virtue involved citizens taking part in ruling and being ruled.

• Civic virtue is not an inherent human quality but needs to be developed.
Respecting Others

• Respect is a positive view that you form of how someone is living their life.

• It’s the sense of worth or personal value that you attach to someone based on many factors.

• Factors include what that person is doing with their life, how they treat you and others, whether they are honest or not and if they seem to consistently do good things, large or small, for other people.
• It starts with self-respect.
• If you do not respect yourself, it will be more difficult for you to respect anyone else.
• When you demonstrate respect for others, you’ll make someone feel good by granting them respect, that it’s something that they deserve.
• One of the best ways to show respect - to truly listen to another’s point of view, allow each other to have and express our own views, regardless of whether we agree with them or not.
• Respect is one of mankind’s most noble sentiments.
• The highest levels of respect are always earned – never given.
• This is true of self-respect as well as respect for others.
• Before granting the highest level of self-respect or respect for others, make sure the person is worthy of the honor.

• “To be one, to be united is a great thing. But to respect the right to be different is maybe even greater.” - Bono

• “Respect for ourselves guides our morals; respect for others guides our manners” - Laurence Stone
Living Peacefully

• Living in peace is about living harmoniously with yourself, others, and all sentient beings around you.
• It is both an outward and an inward process.
• Outwardly, it’s a way of life in which we respect and love each other in spite of our cultural, religious, and political differences.
• Inwardly, we all need to search our hearts and minds and understand the fear that causes the impulse for violence.
Few Methods To Live Peacefully

• Seek to love, not control others - a will to control with a broad approach of loving others instead, including their faults and differences, is the way to a peaceful life.

• Moderate your convictions – rather than having extremist thinking try to have reflection and deliberative thinking.

• Be tolerant - Tolerance for others is about appreciating diversity, the plurality of modern society, and being willing to live and let others live too.
• **Be peaceful** - While there is much violence in this world, make a choice to not let death and killing be a part of your philosophy of living.

• **Seek forgiveness, not revenge** - When you feel compelled to harm another out of a perceived slight to your reputation, or because you feel that their action deserves an equally abhorrent reaction, you perpetuate anger, violence, and sorrow. Replace this with forgiveness to seek the way of living peacefully.
CARING AND SHARING

• Caring is having and expressing concern about others and their feelings and well being
• Caring should not be limited for one’s family and friends
• People with high ethical and moral standards nurture this quality, and their care and concern embraces the whole humanity
• Highly evolved spirits care for all kinds of living things
• Care for our family, neighbours, friends, colleagues whom we deal with one day –to-day basis can be a good starting point
• Sharing of goods, knowledge, facilities experience etc. leads to collective the growth of society
• The act of sharing should come voluntarily and without compulsion
• Adherence to ethical principles certainly motivate sharing. Enmity, divide, fear etc vapourize instantly through sharing
• Sharing tends to maximise the overall happiness of human being
• Children who are encouraged to share their toys are likely to cooperate with others as adults
• most welfare schemes of government aimed at sharing of resources
• Sharing is an important aspect of human interaction that drives business strengthens ties and leads to peaceful living
• The internet itself an example of sharing information digitally
HONESTY

• It is often said that honesty is the best policy
• Honesty is the trait of adhering to truth even when it is inconvenient and unpopular

In a workplace context, honesty amounts to

1. Starting facts clearly without dilution, distortion or exaggeration in all written and non-written communication

2. Not withholding fact or relevant information intentionally for selfish reasons
3. Refraining from deceiving customers through false advertisement

4. Not taking bribes or resorting to nepotism

5. Maintaining confidentiality with regards to crucial information of company while discussing with rival companies

6. Being straightforward, trustworthy and loyal in all relationships

7. Seeking truth before deciding and acting
COURAGE

• Contrary to popular conception, courage is not the absence of fear
• Courage is the ability to face the fear and do something in spite of being afraid
• It is the willingness to confront pain, agony and uncertainty for something that we believe in.

1. Courage as a part of duty
   - a fire fighter rescue people from a building on fire shows courage as part of duty
2. Courage to face physical changes
   - some people go for death defining stunts and extreme sports, go for adventure trips, take risk because of the trill they get

3. Courage in a social context
   - to challenge injustice, to stand up against discrimination, to change the order without resorting to violence etc

4. Intellectual courage
   - this amounts to the courage to seek and speak the truth even if it upsets prevailing belief and usurps existing conventions
VALUING TIME

• People today find it increasingly difficult to manage their time

• If someone is not able to manage their time, he cannot be trusted with keeping his word or valuing other people’s time

• Executives struggle to balance their family and professional lives due to apparent lack of time.

• Even in workplace people often fail to turn up in time for meeting, fail to complete important task by the end of the day and consequently waste others time.
WAYS TO UTILIZE TIME EFFECTIVELY

• Becoming aware that time is a perishable resource
• Getting your priorities right
• Be punctual
• Avoid re-inventing the wheel
• Plan in advance
• Get rid of procrastination
1. Time is perishable resource
   - time once lost never be found again, valuing time means valuing life
2. Be punctual
   - being punctual shows respect. If a person is not on time, it means he has no respect for other people’s time
3. Avoid re-inventing the wheel
   - a lot of time is saved
   - available time can be effectively used to develop from others have stopped, thus creating more value
4. Planning in advance

1. Annual or weekly plans must contain all the high value activities you should be doing that year/week.

2. Projects that come with a pre-set deadline quickly qualify as urgent. Set aside sufficient time to deal with it.

3. Allot time for your most important task.

4. Stick with scheduled appointments.

5. Figure out the strategies beforehand.

6. Batch similar activities together.
5. Get rid of procrastination
   -procrastination is the act or habit of putting or delaying some activity often because it appears unpleasant

6. Get your priorities right
   -the most important work should be completed first followed by other jobs
   -make a to do list
COOPERATION

• Process of individual/s organizations - working together synergistically - towards accomplishment of common objectives - without surrendering individual autonomy

• A joint action or a process of working together consciously for common benefit

• Continuous process
BENEFITS

- Pooling of diverse and or complementary skills
- Gathering more ideas and enhanced manpower
- Greater resources and minimized time etc.
• Cooperation between different sections of a company ensures better output, quality and efficiency

• Lack of cooperation leads to
  ➢ Delay and lack of coordination

  ➢ Insufficient communication

  ➢ Low morale – all of which leads to the possible collapse of the company
REASONS FOR LACK OF COOPERATION

• Absence of effective leadership

• Lack of awareness among the employees

• Differential treatment, ethnic, linguistic or socio-cultural bias

• Ego conflicts and lack of professionalism etc.
COMMITMENT

- The quality of holding on to a cause that one believes in, in spite of difficulties and set backs with fervent attitude and sustained interest

- Dedication of an employee to his job and to the organisational goals while adhering to ethical principles
Allen and Meyer proposed 3-component model for organizational commitment, namely

- Affective commitment
- Continuance commitment
- Normative commitment
AFFECTIVE COMMITMENT

• Commitment due to affection

• Happens when the employee loves his job and is aligned with the organisational goals and values – frequently out of an emotional attachment

• Job satisfaction
CONTINUANCE COMMITMENT

- Happens when the employee is driven by the fear of the possible losses he could incur by leaving the company

- The perceived losses may be
  - Financial
  - Pertaining to career or social

- The pressure due to this make the employee stay connected
NORMATIVE COMMITMENT

- Happens when the employee feels obligated or duty bound to stay with the organization even if they are unhappy, simply because it seems the right thing to do.

- This moral obligations and consequent commitment can rise out:
  
  - A feeling of indebtedness to the company
    - Eg – Investment by the company for training employee
  
  - A feeling of indebtedness to the employer or co-workers
  
  - Personal beliefs about loyalty
According to Gary Dessler, there are 5 rules to enhance organisational commitment. They are

• Commit to people – first values

• Clarify and communicate the organization’s mission

• Guarantee organizational justice

• Create a sense of community

• Support employee development
EMPATHY

• Ability and willingness to imagine oneself in another’s place and see things through their perspective

• Its about “putting oneself in the other person’s shoes “

• A person who empathizes with others will feel, understand and accept their emotions, motives and concerns

• Enhance prosocial(helping) and altruistic behaviour
Empathy in workplace leads to

• Better teamwork

• Better understanding of what motivates others

• Better appreciation of customer needs

• Better understanding of public perception of the company
SELF-CONFIDENCE

• The quality of believing in oneself and one’s abilities

• Encompasses of two separate traits – self esteem and self efficacy
SELF - ESTEEM

• One’s innate sense of self-worth

• It reflects the individual’s evaluation of his or her value

• It is essentially a psychological trait arising out of a belief that one has a right to be happy, deserving and loved
SELF-EFFICACY

• Belief in one’s own capacity to perform, specific tasks and reach goals
• Taking on difficult task preserving in spite of challenges are indicators of self-efficacy
Having self-confident employee in workplace leads to

• Employees arising their views openly
• Setting of higher goals for themselves and the organization
• Better appreciation of others and their efforts
• Lesser tendency to complain
• Openness to change
• Better overall organizational performance
Six pillars of self-esteem according to Nathaniel Brandon

- Conscious living
- Self-acceptance
- Taking responsibility
- Self-assertiveness
- Purposeful living
- Personal integrity
Ways to improve self confidence

• Be conscious about the present moment without losing the wider context
• Know that you always have a choice and make conscious decisions rather than being fatalistic
• Accept yourself and your ability to change
• Do not get bogged down by others opinions about you
• Commit to constant learning as a way of life
• Accept new challenges
• Practise resilience
• Understand material possessions do not determine ones worth
• Learn to say no to bad things
• Accept compliments gracefully
• Appreciate others, treat them with respect and be grateful for what they do for you
• Practise self-talk
• Don’t hesitate to ask for help, if needed
• Conquer fear doing what you dread
• Use social media to connect with others, not to compete with them
• Dress for success- it is not necessary to wear expensive things. But it is absolutely necessary to be neat, clean, well groomed
• Practise good posture

• Speak up—don’t shy away from arising your opinion

• Communicate effectively
  • Be sincere
  • Maintain eye – contact
  • Be courteous
  • Speak clearly
  • Listen to others

• Be ready and comfortable to apologise if you make a mistake
CHARACTER

• The particular combination of qualities in a person or place that makes them different from others
• The way someone thinks, feels, and behaves or someone's personality
• Integrity, respect and responsibility
• Basic integrity – defined by honesty, authenticity and truth telling – is the foundation for an organization
• Empathy
• Lack of blame
• Humility
• Emotional mastery
• Accountability
• Self-confidence
• Courage
• Focus on the whole
SPIRITUALITY
What is spirituality?

- Spiritual matters are very personal and can mean something different to each person.
- Traditionally being spiritual signified having an attachment to religious values, or matters of the spirit, rather than material or worldly interests.
- More recently it has also taken on to mean reaching higher levels of consciousness using meditation, yoga and similar practices.
- Spirituality can be considered as having some of the following qualities:
  a) A sense of purpose
  b) A feeling of inner peace
  c) Religious observance
  d) Working towards the greater good
- Spirituality can also include helping others achieve these things.
Why Is Spirituality Important?

• Contemplative practice is good for you.
  ➢ Contemplative practices are activities that guide you to direct your attention to a specific focus—often an inward-looking reflection or concentration on a specific sensation or concept.
  ➢ Many spiritual traditions have a long history of using contemplative practices to increase compassion, empathy, and attention, as well as quiet the mind.
    ❖ Meditation
    ❖ Prayer
    ❖ Yoga
    ❖ Journaling

• A spiritual community can improve your life.
• Spiritual strength can help you overcome hardships.
• Spiritual people make healthier choices.
• Spirituality may help you live longer.
• Forgiveness is good medicine.
How to Become More Spiritual

- **Take time for yourself** - Rejuvenate your spirit and nurture yourself by listening to relaxing music. Read inspirational literature; get a massage.
- **Help those in need of your assistance** - When you help others, you automatically connect better with the rest of humanity. Volunteer as a big brother or sister, coach little league, donate to the food shelter. Every little bit helps.
- **Practice gratitude** - There are so many things to be grateful for in life. Take time to reflect on them and acknowledge how fortunate we all are for family, friends, and endless opportunities.
- **Practice mindfulness** - Become aware of your environment. Be aware of yourself within your environment. Enjoy the colors and smells of nature around you. Enjoy the feel of rain falling on your nose and the wind blowing on your face. It will put you in a revitalizing, fresh state of awareness.
- **Express yourself** - If you don't already engage in artistic or expressive activities, learn to dance, sing, play a musical instrument, or take art lessons. Doing so puts you in touch with your creative, right brain side. We all need to balance the logical, linear aspects of ourselves.
• Be kinder to others
• Hand out compliments (but only if they are genuine)
• Get to know people better
• Develop an appreciation of nature — walk in the park, enjoy a garden, study a flower
• Be grateful and thankful for what you have.
SENSES OF ENGINEERING ETHICS
What is engineering ethics?

• Ethics, also known as moral philosophy, is a branch of philosophy that involves systematizing, defending, and recommending concepts of right and wrong conduct.

• Like the ethics, engineering ethics also aims at knowing moral values related to engineering, finding accurate solutions to the moral problems in engineering and justifying moral judgments of engineering.

• Engineering ethics is also using some currently accepted codes and standards which are to be followed by group of engineers and engineering societies.

• It is the study of morality
5 Ethical Principles

- Beneficence
- Respect for autonomy
- Non-Maleficence
- Fidelity
- Justice
• Beneficence- It is an obligation to improve and enhance the welfare of others, even where such may inconvenience or limit the freedom of the person offering the assistance.
• Respect Autonomy- It is assumed that individuals have the right to decide how they live their lives, as long as their actions do not interfere with the welfare of others. One, therefore, has the right to act as a free agent, and has freedom of thought and choice.
• Justice- To be just in dealing with others assumes equal treatment of all, to afford each individual his or her due portion, and in general, to observe the golden rule.
• Fidelity- One should keep promises, tell the truth, be loyal, and maintain respect and civility in human discourse. Only in so far as we sustain faithfulness can we expect to be seen as truly trustworthy.
• Non-Maleficence-The obligation to avoid inflicting either physical or psychological harm on others may be a primary ethical principle.
What is morality?

• The term ‘morality’ concerns with
  (a) what ought or ought not to be done in a given situation,
  (b) what is right or wrong in handling it,
  (c) what is good or bad about the persons, policies and principles involved in it.

• Moral reasons include
  (a) respecting others and ourselves,
  (b) respecting the rights of others,
  (c) keeping promises,
  (d) avoiding unnecessary problems to others and avoiding cheating and dishonesty,
  (e) showing gratitude to others and encourage them to work.
• If an engineering decision is said to be a good one, it has to meet out all the specifications.
• These specifications must be covered both the technical and the moral specifications such as safety of the product, reliability, easy maintenance and the product should be user-friendly with environment.
Varieties Of Moral Issues

• Typical Ethical Issues that Engineers Encounter
  a) Safety
  b) Acceptable risk
  c) Compliance
  d) Confidentiality
  e) Environmental health
  f) Data integrity
  g) Conflict of interest
  h) Honesty/Dishonesty
  i) Societal impact
  j) Fairness
  k) Accounting for uncertainty, etc.
• There are so many engineering disasters which are greater / heavier than the level of acceptable or tolerable risk.

   Ex:-

   1. Nuclear plant accident at Chernobyl (Russia)
   2. Chemical plant at Bhopal (India) where a big disaster of gas leakage
   3. Oil spills from some oil extraction plants (the Exxon Valdez plant)
   4. Hazardous waste and pollution from using asbestos and plastics

• Hence, it is essential for engineers to get awareness on the above said disasters. They should also know the importance of the system of engineering.

• When malfunction of the system is a rapid one, the disaster will be in greater extent and can be noticed immediately.

• These cases also explain and make the engineers to be familiar with the outline of the case in future and also about their related ethical issues.
Approaches to Engineering Ethics

- **Micro-Ethics:** This approach stresses more about some typical and everyday problems which play an important role in the field of engineering and in the profession of an engineer.

- **Macro-Ethics:** This approach deals with all the social problems which are unknown and suddenly burst out on a regional or national level.

- So, it is necessary for an engineer to pay attention on both the approaches by having a careful study of how they affect them professionally and personally.

- The engineers have to tolerate themselves with the everyday problems both from personal and societal point of view.
Where and How do Moral Problems arise in Engineering?

- Any product or project has to undergo various stages such as planning, idea, design, and manufacturing which is followed by testing, sales and services.
- This has to be done by engineers of various branches like Civil, Mechanical, Electrical, Chemical etc.
- These engineers may be grouped together as a team or they may be separated from each other with an interconnection or co-ordination.
- Inspite of the engineers’ full attention and care, sometimes the product or project may be unsafe or less useful.
• This may be due to some reasons

1) The product or project may be designed for early obsolescence or

2) Due to under pressure because of running out of time, budgetary etc or

3) By ignorance on the size of the project, or

4) Because of the large number of a products sold on the mass market, people may be affected.
Inquiry means an investigation

- Engineering ethics also involves investigations into values, meaning and facts.

These inquiries in the field of Engineering ethics are of three types:

1. Normative Inquiries
2. Conceptual Inquiries
3. Factual or Descriptive Inquiries
Normative Inquiries

- Helpful to identify the values which guide the individuals and groups in taking a decision.
- Meant for identifying and justifying some norms and standards of morally desirable.
- The normative questions are

1) How do the obligations of engineers protect the public safety in given situations?
2) When should an engineer have to alarm their employers on dangerous practices?
3) Where are laws and organizational procedures that affect engineering practice on moral issues?
4) Where are the moral rights essential for engineers to fulfill their professional obligations?

Ie, Normative inquiries also have the theoretical goal of justifying moral judgments.
Conceptual Inquiry:

➢ For describing the meaning of concepts, principles, and issues related to Engineering Ethics

➢ also explain whether the concepts and ideas are expressed by single word or by phrases.

EXAMPLES:

1) What is the safety and how it is related to risk?
2) What does it mean when ethics say engineers should protect the safety, health and welfare of the public?
3) What is a ‘bribe’?
4) What is a ‘profession’ and ‘professional’?
Factual or Descriptive Inquiries

- These help to provide facts for understanding and finding solutions to value based issues.

- These are inquiries used to uncover information using scientific techniques.

- These inquiries get to information about business realities, history of engineering profession, procedures used in assessment of risks and engineers psychology.

- Complementary and interrelated
Moral Dilemma

Why study engineering ethics?

Engineering ethics is not only teaching moral behavior in knowing about immoral in a set of beliefs, but also increasing the ability of engineers and other professionals to face boldly with the moral problems arising from technological advancements, changes and other related activities.

Dilemmas are certain kind of situations in which a difficult choice has to be made.

Moral dilemmas have two or more foldings - moral obligations, duties, rights, goods or ideals come into disagreement with each other.

One moral principle can have two or more conflicting applications for a particular given situation.
There are three types of complexities.

**VAGUENESS:**

This complexity arises due to the fact that it is not clear to individuals as to which moral considerations or principles apply to their situation.

**CONFLICTING REASONS**

Even when it is perfectly clear as to which moral principle is applicable to one’s situation, there could develop a situation where in two or more clearly applicable moral principles come into conflict.

**DISAGREEMENT**

Individuals and groups may disagree how to interpret, apply and balance moral reasons in particular situations.
Steps / Procedures In Facing Moral Dilemmas

- Identifying the relevant moral factors and reasons: i.e. Finding solutions for (i) the conflicting responsibilities (ii) the competing rights and (iii) the clashing ideals involved.
- Collecting and gathering all the available facts which are relevant to the moral factors while resolving.
- Ranking the moral considerations or principles on the basis of importance as applicable to the situation.
- Considering alternative courses of action for resolving the problems and tracing the full implications of each. i.e. conducting factual inquiries.
- Having talked with the colleagues, friend about the problem getting their suggestions and alternative ideas on resolving that dilemma.
- Arriving at a careful and reasonable judgment or solution by taking into consideration of all important moral factors and reasons on the basis of the facts or truths.
Moral Autonomy

• Autonomy means self-governing or self-determining i.e act independently.

• Moral autonomy is concerned with the independent attitude of a person related to ethical issues.

• It helps to improve the self-determination among the individuals.

• Autonomous individuals think for themselves and do not assume that customs are always right.

• They seek to reason and live by general principles.

• Their motivation is to do what is morally reasonable for its own sake, maintaining integrity, self-respect, and respect for others
Skills For Improving Moral Autonomy

➢ The engineers must have the ability to distinguish and relate these moral problems with the problems of law, economics, religions principles etc.

➢ They must possess(have) the skills of understanding, clarifying and assessing the arguments which are against the moral issues.

➢ They must have the ability to suggest the solutions to moral issues, on the basis of facts. These suggestions must be consistent and must include all the aspects of the problem.

➢ They must have the imaginative skill to view the problems from all view points and also be able to suggest a proper alternative solution.
They must be able to tolerate while giving moral judgments and decisions which may cause trouble. (i.e. they have to understand the difficulties in making moral decisions.)

They must have adequate knowledge and understanding about the use of ethical language so as to defend or support their views with others.

They must have some better knowledge in understanding the importance of suggestions and better solutions while resolving moral problems and also about the importance of tolerance on some critical situations.

They must understand the importance of maintaining the moral honesty i.e. the personal convictions and beliefs and individual’s professional life must be integrated. They must have this skill of doing so.
Kohlberg’s Theory

- Moral Autonomy is based on the psychology of moral development.
- The first psychological theory was developed by Jean Piaget.
- On the basis of Piaget’s theory, Lawrence Kohlberg developed three main levels of moral development which is based on the kinds of reasoning and motivation adopted by individuals with regard to moral questions.
- Kohlberg’s theory of moral development is very much related to the goals of studying ethics at college level.
- Moral responsibility comes out of the foundation of early moral training given by an individual’s parents and culture.
- Each level is based on the degree to which a person conforms to conventional standards of society.
- Each level has two stages that represent different degrees of sophistication in moral reasoning.
Stages Of Moral Development

Pre-conventional Level:

• It is nothing but self-centered attitude.
• In this level, right conduct is very essential for an individual which directly benefits him.
• According to this level, individuals are motivated by their willingness to avoid punishment or by their desire to satisfy their own needs.
• This level is related to the moral development of children and some adults who never want to go beyond a certain limit.
**Conventional Level:**

- As per this level the rules and norms of one’s family or group or society has been accepted as the final standard of morality.
- When individuals are under this level, always want to satisfy others and also to meet the expectations of the society and not their self interest.
- No adult tries to go beyond this level.

**Post-Conventional Level:**

- This level is said to be attained when an individual recognizes the right and the wrong on the basis of a set of principles which governing rights and the general good which are not based on self-interest or social conventions.
- These individuals are called “autonomous”, because they only think for themselves and also they do not agree that customs are always correct.
- They want to live by general principles which are universally applied to all people.
**Kohlberg’s Levels and Stages of Moral Development**

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
</table>
| **I. Preconventional Level** | Moral reasoning is guided by external consequences. No internalization of values or rules. | Stage 1: Punishment and Obedience  
“Right” is obeying the rules simply to avoid punishment because others have power over you and can punish you.  
Stage 2: Mutual Benefit  
“Right” is an even or fair exchange, so that both parties benefit. Moral reasoning guided by a sense of “fair play.” |
| **II. Conventional Level** | Moral reasoning is guided by conformity to social roles, rules, and expectations that the person has learned and internalized. | Stage 3: Interpersonal Expectations  
“Right” is being a “good” person by conforming to social expectations, such as showing concern for others and following rules set by others so as to win their approval. For example, behaving like a “good” child, student, citizen, spouse, friend, or employee. |
| **Stage 4: Law and Order** | “Right” is helping maintain social order by doing one’s duty, obeying laws simply because they are laws, and showing respect for authorities simply because they are authorities. |  |
| **III. Postconventional Level** | Moral reasoning is guided by internalized legal and moral principles that protect the rights of all members of society. | Stage 5: Legal Principles  
“Right” is helping protect the basic rights of all members of society by upholding legalistic principles that promote the values of fairness, justice, equality, and democracy.  
Stage 6: Universal Moral Principles  
“Right” is determined by self-chosen ethical principles that underscore the person’s profound respect for ideals such as the sanctity of human life, nonviolence, equality, and human dignity. If these moral principles conflict with democratically determined laws, the person’s self-chosen moral principles would take precedence, such as the conscientious objector who refuses to be drafted because of moral principles against war. |

**Sources:** Based on Kohlberg (1981) and Colby & others (1983).
Criticisms of Kohlberg’s theory

- Research has not supported Kohlberg’s belief that the development of abstract thinking in adolescence invariably leads people to the formation of idealistic moral principles.

- Some cross-cultural psychologists argue that Kohlberg’s stories and scoring system reflect a Western emphasis on individual rights, harm, and justice that is not shared in many cultures.

- Kohlberg’s early research was conducted entirely with male subjects, yet it became the basis for a theory applied to both males and females.
Gilligan's Theory, Consensus and Controversy, Models of Professional Roles
Introduction

- **Gilligans theory**
  Gilligan produces her own stage theory of moral development for women. It has three major divisions: preconvention, conventional, and post conventional.

- **Consensus and controversy**
  Consensus and Controversy means Agreement and Disagreement respectively while considering the moral autonomy

- **Models of Professional Roles**
  To improve the public safety, wealth and welfare an engineer has to play various models
Gilligan's goal is to prove that women are not moral midgets.

Gilligan's Theory is divided into 3 stages of moral development:

1. **Pre-conventional**
   - Person only cares for themselves in order to ensure survival.
   - In this phase, the person's attitude is considered selfish and the person seeks the connection between themselves and others.
Gilligan’s Theory

2. Conventional

- Responsibility
- More care shown for other people
- Situation sometimes carries on to ignoring need of self
- In this phase tensions between responsibility of caring for others and caring for self are faced
Gilligan's Theory

3. Post Conventional

- Acceptance of the principle of care for self and others is shown
- Some people never reach this level
Consensus and Controversy

- Consensus means agreement and controversy means Disagreement
- Consensus and Controversy are playing vital role while considering the moral autonomy
- When an individual exercises the moral autonomy he cannot get the same results as others get in applying moral autonomy. Surely there must be some moral divergences due to controversy
- This disagreements require some tolerances
Models of Professional Roles

➢ To improve the public safety, wealth and welfare an engineer has to play various models, they are as follows

1. Savior
   • Engineers are responsible for creating an Utopian society in which everything is possible and can be achieve without much effort

2. Guardian
   • Engineers only know the directions to which technology will be developed
   • So they should act as Guardians to the technological improvements
Models of Professional Roles

3. Bureaucratic Servant
   • Engineers role in the management is to be the servant who receives and translates the directive of management into better achievements

4. Social Servant
   • The role of engineer is not only providing service to others but also to their responsibility to the society
   • The interests of the society can be expressed to the engineers either directly or indirectly
5. Social Enabler and Catalyst

- The engineer has to play a role of creating a better society and should be the cause of making social changes.
- Service given by the engineers to the society includes carrying out the social directives.

6. Game Player

- We cannot say that engineers are servants or masters of anyone. They are playing the economic game rules which may be effective at a given time.
- Their aim is to play successfully with in the organization enjoying the happiness of technological work and the satisfaction of winning and moving ahead in a complete world.
THEORIES OF RIGHT ACTION

Two types

- Consequentialist theories
- Non consequentialist theories- Two types
  - Virtue theories
  - Duty theories
CONSEQUENTIALIST THEOREM

• Emphasizes morality of an action solely as a function of the goodness or badness of its outcomes.

• Also called as teleological theories, since the end result is considered the only criterion for moral judgement.
CATEGORIES OF CONSEQUENTIALIST THEOREM

Three categories

• Ethical egoism
• Ethical altruism
• Utilitarianism
ETHICAL EGOISM

• It is always moral to do something if it promotes one’s own good or self interest regardless of its impact on others.

• Takes the view that an action is morally right if its consequence is good for the agent performing the action.
ETHICAL ALTRUISM

• Moral value associated with an action solely depends on others regardless of its effect on oneself.

• It’s more like self-sacrifice.

• An action is morally right if its consequence is good for individuals other than the agent performing the action.
UTILITARIANISM

• It holds that right actions are those that maximize total utility.
• The greatest good for the greatest number is achieved.
ACT UTILITARIAN THEORY

- Focuses on the consequence of each individual action.
- If we follow Act Utilitarian Theory we may have to allow some immoral deeds.
RULE UTILITARIAN THEORY

• It states that an action is right if practiced as a general rule, will maximize the good or happiness of greatest number of people.
• It brings morality and justice into the practice.
SELF INTEREST

• It is nothing but one’s personal good.
• Refers to the goodness of oneself in the long run.
• According to Thomas Hobbes and Any Rand, moral values are reduced to concern for oneself but always a rational concern which requires consideration of a person’s long term interest.
CUSTOMS

Ethical Pluralism:
• Various cultures in the society lead to tolerance for various customs, beliefs, and outlooks.
• There are many varied moral values, which allow variation in the understanding and application of values by the individuals or groups in their everyday transactions.
• customs can have moral significance in deciding how we should act. This view is called ‘ethical pluralism’.
Ethical Relativism:

• According to this principle, actions are considered morally right when approved by law or custom, and wrong when they violate the laws or customs.

• The deciding factor is the law or the customs of the society.

• Ethical relativism attempts to reduce moral values to laws, conventions and customs of particular societies.
Consequences of Ethical Relativism:

• We cannot say other “morals” (treatment of others) are inferior to our own society’s.
• We decide the value of our actions based only on what our particular society thinks.
• We should show a lot of tolerance for different customs and outlooks in a society in which we live in.
Reasons for Acceptance Of Ethical Relativism:

• Laws appear to be objective ways for judging values. The laws and customs tend to be definite, clear and real, but not always. Moral reasons allow objective criticism of laws, as being morally lacking.

➤ E.g: Apartheid laws of South Africa violated the human rights of the native Africans. No legal protection was available for native citizens for a long time. Now, these laws have been repealed.
• Ethical relativism assumes that the values are subjective at the cultural level. Moral standards also vary from culture to culture. The objectivity is supported by the existing laws of that society.

• Moral judgments should be made in relation to certain factors that may vary from case to case. The morally important factors for making judgments include the customs and laws.
• Early anthropologists (a study of mankind, its customs, beliefs, etc.) had a specific tendency to over-stress the scope of moral difference between cultures.

• Modern anthropologists insist that all cultures shall exhibit the virtue of social welfare and safety against needless death or physical or mental harm.

• Moral differences were based on the circumstances and facts and not on the difference in moral attitudes.
RELIGION

• Religions have played major roles in shaping moral views and moral values over geographical regions.
  ➢ Christianity has influenced the Western countries.
  ➢ Islam has influenced Middle-East countries.
  ➢ Buddhism and Hinduism in Asia.
  ➢ Confucianism in China.
• Religious views support moral responsibility.
• They have set high moral standards.
- Hinduism holds polytheistic (many gods) view, and virtues of devotion and surrender to high order.

- Christianity believes in one deity and emphasizes on virtues of Love, Faith, and Hope.

- Buddhism is non-theistic and focuses on compassion.
  - Faith in the religions provides trust and this trust inspires people to be moral.
  - The religions insist on tolerance and moral concern for others.
• Many religious sects have adopted poor moral standards.

➢ Example:
  ▪ many religious sects do not recognize equal rights for women.
  ▪ The right to worship is denied for some people.
  ▪ People are killed in the name of or to promote religion.
• Conflicts exist between the ‘secular’ and religious people and between one religion and another.
• So religious views have to be morally scrutinized.
Divine Command Ethics:

• This says that to be moral, a person should believe in God and an action is right only if it is commanded by God.

• Difficulties in this approach are
  ➢ whether God exists or not is not clear.
  ➢ How to know what are the God’s commands?
  ➢ How to verify the genuineness of the commands?
• Religions such as Hinduism, Islam, and Christianity accept the existence of God.

• Buddhism, Taoism, and Confucianism adopt only faith in a right path and do not believe in God.
APPLICATION OF ETHICAL THEORIES

- Ethical theories aid in identifying the moral considerations or reasons that constitute a dilemma.
- It provides helpful practical guidance in moral issues towards the solution.
- They provide a precise sense of what kinds of information are relevant to solving moral problem.
- Justifying professional obligations and decisions.
• By providing frame works for development of moral arguments, the theories strengthen the ability to reach balanced and insightful judgments.

• Ethical theories are useful in relating ordinary and professional morality.
REFERENCE

• *Life skills for engineers* by Ramesh S & Vishnu R.G

• [http://nptel.ac.in/courses/110105034/SM_Web/Ch14%20revised.pdf](http://nptel.ac.in/courses/110105034/SM_Web/Ch14%20revised.pdf)

• [http://highered.mheducation.com/sites/dl/free/0070140278/784672/PPT_McSh](http://highered.mheducation.com/sites/dl/free/0070140278/784672/PPT_McSh)