Chapter – 1	# Human Values

1.0 OBJECTIVES (WHY ENGINEERING ETHICS?)

The objectives of this course on 'Professional Ethics and Human Values' are: (*a*) to understand the moral values that ought to guide the Engineering profession, (*b*) resolve the moral issues in the profession, and (*c*) justify the moral judgment concerning the profession. It is intended to develop a set of beliefs, attitudes, and habits that engineers should display concerning morality.

The prime objective is to increase one's ability to deal effectively with moral complexity in engineering practice.

Alternatively, the objectives of the study on Professional Ethics may be listed as:

(A) Improvement of the cognitive skills (skills of the intellect in thinking clearly)

    1. Moral awareness (proficiency in recognizing moral problems in engineering)

    2. Cogent moral reasoning (comprehending, assessing different views)

    3. Moral coherence (forming consistent viewpoints based on facts)

    4. Moral imagination (searching beyond obvious the alternative responses to issues and being receptive to creative solutions)

    5. Moral communication, to express and support one's views to others.

(B) To *act* in morally desirable ways, towards moral commitment and responsible conduct

    6. Moral reasonableness i.e., willing and able to be morally responsible.

    7. Respect for persons, which means showing concern for the well-being of others, besides oneself.

    8. Tolerance of diversity i.e., respect for ethnic and religious differences, and acceptance of reasonable differences in moral perspectives.

    9. Moral hope i.e., believe in using rational dialogue for resolving moral conflicts.

    10. Integrity, which means moral integrity, and integrating one's professional life and personal convictions.

1.1 MORALS

Morals are the welfare principles enunciated by the wise people, based on their experience and wisdom. They were edited, changed or modified or evolved to suit the geography of the region, rulers (dynasty), and in accordance with development of knowledge in science and technology and with time.

Morality is concerned with principles and practices of morals such as: (*a*) What ought or ought not to be done in a given situation? (*b*) What is right or wrong about the handling of a situation? and (*c*) What is good or bad about the people, policies, and ideals involved?

Morality is different from Ethics in the following ways:

Morality	*Ethics*
1. More general and prescriptive based on customs and traditions.	1. Specific and descriptive. It is a critical reflection on morals.
2. More concerned with the results of wrong action, when done.	2. More concerned with the results of a right action, when not done.
3. Thrust is on judgment and punishment, in the name of God or by laws.	3. Thrust is on influence, education, training through codes, guidelines, and correction.
4. In case of conflict between the two, morality is given top priority, because the damage is more. It is more common and basic.	4. Less serious, hence second priority only. Less common. But relevant today, because of complex interactions in the modern society.
5. Example: Character flaw, corruption, extortion, and crime.	5. Example: Notions or beliefs about manners, tastes, customs, and towards laws.

As against morals and ethics, laws are norms, formally approved by state, power or national or international political bodies. Breaking the norms is called *crime*, and invite specific punishment.

1.2 VALUES

1.2.1 Definition

Humans have the unique ability to define their identity, choose their values and establish their beliefs. All three of these directly influence a person's behavior. People have gone to great lengths to demonstrate the validity of their beliefs, including war and sacrificing their own life! Conversely, people are not motivated to support or validate the beliefs of another, when those beliefs are contrary to their own.

People will act congruent with their personal values or what they deem to be important.

A value is defined as a principle that promotes well-being or prevents harm." Another definition is: *Values are our guidelines for our success—our paradigm about what is acceptable."* Personal values are defined as: "*Emotional beliefs in principles regarded as particularly favorable or important for the individual."* Our values associate emotions to our experiences and guide our choices, decisions and actions.

A person's observations on its environment are filtered through his values to determine whether or not he should expend energy to do something about his experiences. A person who values gold and sees a large bag of gold (a positive value) in his path as he walks, will be motivated to reach down and pick it up. A person who values his life and knows about venomous snakes will retreat from the sound of a rattlesnake (a negative value) from nearby, when he is walking in the desert. Said in another way, *"Values are the scales we use to weigh our choices for our actions, whether to move towards or away from something."*

Not all values have the same weight or priority. Some are more important than others and must be satisfied before others can be addressed. **Dr. Abraham Maslow** illustrated this with his hierarchy of human needs. Survival has a higher priority than security, which has a higher priority than social acceptance. Self-esteem can only be addressed to the degree that social acceptance is fulfilled. Similarly, self-actualization can only be pursued to the degree that self-esteem has been satisfied.

A person's beliefs, values and identity are usually acquired unconsciously based on his personal experience or observations of others' experiences as to what produces desirable or undesirable results in the environment. A baby's learning *to walk and talk* is a clear example of identifying with human adults, valuing the act of being able to have the mobility and communication ability of an adult and the belief, based on unconscious observation, that humans can do walk and do talk with each other.

Physiologists have identified the parts of the human brain that are involved in producing behavior in accordance with beliefs and values. All information collected by human senses is passed through a net-like group of cells, known as the Reticular Activating System (RAS), located near the top of the brain stem. The RAS compares the data received with accepted values, positive and negative (threats), and beliefs stored in memory and determines whether or not immediate action is required. The results of the RAS's comparison are communicated to the 'amygdala' near the mid-brain.

The 'amygdala' produces neuro-chemicals that cause emotions consistent with the nature of and proportional to the match between environment and values and beliefs. The neuro-chemicals initiate the chemical processes needed for the action to be taken. If the emotions produced are strong enough, the perceived information is blocked from reaching the logical, rational and conscious executive center of the brain, the pre-frontal lobes. In which case, the resulting behavior will be automatic, not necessarily logical or rational, and completely in accordance with the person's strongest held beliefs, values and/or identity.

By positive affirmations, one can modify or create new beliefs about a person's identity and/or what is important to him (values). Verbal repetition of statements intended to become new beliefs, and values will result in these being stored for use by the RAS for comparison with the environment being experienced. This is the mechanism how the beliefs or values are modified.

1.2.2 Types of Values[2]

The five core human values are: (1) Right conduct, (2) Peace, (3) Truth, (4) Love, and (5) Non-violence.

1. Values related to RIGHT CONDUCT are:
   (*a*) SELF-HELP SKILLS: Care of possessions, diet, hygiene, modesty, posture, self reliance, and tidy appearance
   (*b*) SOCIAL SKILLS: Good behavior, good manners, good relationships, helpfulness, No wastage, and good environment, and
   (*c*) ETHICAL SKILLS: Code of conduct, courage, dependability, duty, efficiency,

ingenuity, initiative, perseverance, punctuality, resourcefulness, respect for all, and responsibility

2. Values related to PEACE are: Attention, calmness, concentration, contentment, dignity, discipline, equality, equanimity, faithfulness, focus, gratitude, happiness, harmony, humility, inner silence, optimism, patience, reflection, satisfaction, self-acceptance, self-confidence, self-control, self-discipline, self-esteem, self-respect, sense control, tolerance, and understanding

3. Values related to TRUTH are: Accuracy, curiosity, discernment, fairness, fearlessness, honesty, integrity (unity of thought, word, and deed), intuition, justice, optimism, purity, quest for knowledge, reason, self-analysis, sincerity, sprit of enquiry, synthesis, trust, truthfulness, and determination.

4. Values related to LOVE are: Acceptance, affection, care, compassion, consideration, dedication, devotion, empathy, forbearance, forgiveness, friendship, generosity, gentleness, humanness, interdependence, kindness, patience, patriotism, reverence, sacrifice, selflessness, service, sharing, sympathy, thoughtfulness, tolerance and trust

5. Values related to NON-VIOLENCE are:
   (*a*) PSYCHOLOGICAL: Benevolence, compassion, concern for others, consideration, forbearance, forgiveness, manners, happiness, loyalty, morality, and universal love
   (*b*) SOCIAL: Appreciation of other cultures and religions, brotherhood, care of environment, citizenship, equality, harmlessness, national awareness, perseverance, respect for property, and social justice.

PERSEVERANCE is defined as persistence, determination, resolution, tenacity, dedication, commitment, constancy, steadfastness, stamina, endurance and indefatigability. To persevere is described as to continue, carry on, stick at it (in formal), keep going, persist, plug away, (informal), remain, stand firm, stand fast, hold on and hang on. Perseverance builds character.

ACCURACY means freedom from mistake or error; conformity to truth or to a standard or model and exactness. Accuracy is defined as correctness, exactness, authenticity, truth, veracity, closeness to truth (true value) and carefulness. The value of accuracy embraces a large area and has many implications. Engineers are encouraged to demonstrate accuracy in their behavior through the medium of praise and other incentives. Accuracy includes telling the truth, not exaggerating, and taking care over one's work.

DISCERNMENT means discrimination, perception, penetration, and insight. Discernment means the power to see what is not obvious to the average mind. It stresses accuracy, especially in reading character or motives. Discrimination stresses the power to distinguish or select what is true or genuinely excellent. Perception implies quick and often sympathetic discernment, as of shades of feelings. Penetration implies a searching mind that goes beyond what is obvious or superficial. Insight suggests depth of discernment.

Definitions of other terms are given in the appropriate pages of this book.

1.2.3 Evolution of Human Values

The human values evolve because of the following factors:

1. The impact of norms of the society on the fulfillment of the individual's needs or desires.

2. Developed or modified by one's own awareness, choice, and judgment in fulfilling the needs.
3. By the teachings and practice of Preceptors (Gurus) or Saviors or religious leaders.
4. Fostered or modified by social leaders, rulers of kingdom, and by law (government).

1.3 ETHICS

Ethics is the word that refers to morals, values, and beliefs of the individuals, family or the society. The word has several meanings. Basically it is an activity and process of inquiry. Secondly, it is different from non-moral problems, when dealing with issues and controversies. Thirdly, ethics refers to a particular set of beliefs, attitudes, and habits of individuals or family or groups concerned with morals. Fourth, it is used to mean 'morally correct'.

The study on ethics helps to know the people's beliefs, values, and morals, learn the good and bad of them, and practice them to maximize their well-being and happiness. It involves the inquiry on the existing situations, form judgments and resolve the issues. In addition, ethics tells us how to live, to respond to issues, through the duties, rights, responsibilities, and obligations. In religion, similar principles are included, but the reasoning on procedures is limited. The principles and practices of religions have varied from to time to time (history), region (geography, climatic conditions), religion, society, language, caste and creed. But ethics has grown to a large extent beyond the barriers listed above. In ethics, the focus is to study and apply the principles and practices, universally.

1.4 INTEGRITY

Integrity is defined as the unity of thought, word and deed (honesty) and open mindedness. It includes the capacity to communicate the factual information so that others can make well-informed decisions. It yields the person's 'peace of mind', and hence adds strength and consistency in character, decisions, and actions. This paves way to one's success. It is one of the self-direction virtues. It enthuse people not only to execute a job well but to achieve excellence in performance. It helps them to own the responsibility and earn self-respect and recognition by doing the job.

Moral integrity is defined as a virtue, which reflects a consistency of one's attitudes, emotions, and conduct in relation to justified moral values. Further discussion on this is available in Chapter 2.

1.5 WORK ETHICS[1]

Industry and Society are the two systems which interact with each other and are interdependent. Society requires industry/business system which provides manufacturing, distribution and consumption activities. It needs investment (capital input), labor (input), supply (raw materials), production (industries, business organizations), marketing and distribution (transport), and consumption (public, customer). A lot of transactions (and interactions) between these sub-systems involving people are needed for the welfare of the society. It is here, the work ethics plays an essential role.

Work ethics is defined as *a set of attitudes concerned with the value of work, which forms the motivational orientation*. The 'work ethics' is aimed at ensuring the economy (get job, create wealth, earn salary), productivity (wealth, profit), safety (in workplace), health and hygiene (working conditions), privacy (raise family), security (permanence against contractual, pension, and retirement benefits), cultural and social development (leisure, hobby, and happiness), welfare (social work), environment (anti-pollution activities), and offer opportunities for all, according to their abilities, but without discrimination.

Many complex social problems exist in the industrial/business scenario, because:

1. The people desire to be recognized as individuals and treated with dignity, as living human beings. Work is intrinsically valuable so far as it is enjoyable or meaningful in allowing personal expression and self-fulfillment. Meaningful work is worth doing for the sense of personal identity and the self-esteem it holds.

2. Economic independence: Work is the major instrumental good in life. It is the main source of providing the income needed to avoid economic dependence on others, for obtaining desired materials and services, and for achieving status and recognition from others.

3. Pay as well as the pace of work should be in commensurate with the expertise required, acquired, and utilized in the persons. Exploitation and bargained pay should be discouraged.

4. Privacy (personal freedom) of the employee, including women, is to be protected. At the same time, confidentiality of the employer is also to be protected. Mutual trust and loyalty both ways play major roles in this aspect.

5. Security during job and upon retirement: This concept is being accepted only in government jobs, public limited companies, and corporate organizations. The western thought has influenced the Indian private industries and multinationals in a paradigm shift from 'life-long employment' to policies such as 'merit only', 'hire and fire', 'pay and use' etc. This situation has no doubt created tension in the Indian scene.

6. Recognition to non-work activities, such as leisure, paid holiday on the day of visit of a dignitary, social service, and other developmental activities. The workers in prosperous countries are less willing to consider 'work' as their prime interest in life. They claim that such service activities give them *peace of mind* and *happiness*. However, such a trend is likely to decline the work ethics.

7. Hard work and productivity are very essential for the success of an industry. The quality of work life deserves to be improved. Hard labor, undignified jobs (human-drawn *rikshaw*, people carrying night soil), and hazardous jobs are to be made less straining, dignified, and safer. Automation and CNC systems to a large extent have been successful in lessening the human burden. Still, many a hard work can not be replaced by 'virtual work', in the near future.

8. Employee alienation: Absence of or inadequate 'recognition and reward system' and 'grievance redressal system', lack of transparency in policy implementation, factions in trade unions etc. lead to ethical problems, affecting the work ethics. Participative management, quality circles, job rotation, and flexible working hours are some of the measures to counter this situation.

9. A different view of work ethics: Work is considered as a necessary evil. It is a thing one must do in order to avoid worse evils, such as dependency and poverty. That is a major source of anxiety and unhappiness.

10. As per the Protestant Work Ethics, the financial success is a sign that is favored by God. It means making maximal profit is a duty mandated by God. It is to be obtained rationally, diligently, and without compromising with other values such as spending time with one's family and not exploiting or harming others[1]

To work (job), is not for monetary considerations only. Human beings believe that it is good to work. Work is good for the body and mind. It promotes self-respect, self-esteem, good for the family, and obligation to the society and allow the world to prosper. Work lays a moral and meaningful foundation for life. That is why, work ethics affirm s that, the work *per se* is worthy, admirable and valuable at personal and social levels. It improves the quality of life and makes life purposeful, successful, and happy.

By work ethics, duties to the self, family, society, and nation are fulfilled. Rights of the individuals are respected and nourished. Values and virtues are cultivated and enjoyed by all human beings. Further, the quality of life is improved and the environment protected. On the other hand, unemployment and under-employment lead to frustration, social tensions, and occasional militancy. For a developing economy and society, like ours, we need to *promote work ethics*, at all levels, to flourish as developed nation.

1.6   SERVICE LEARNING

Service learning refers to learning the service policies, procedures, norms, and conditions, other than 'the technical trade practices'. The service learning includes the characteristics of the work, basic requirements, security of the job, and awareness of the procedures, while taking decisions and actions. It helps the individuals to interact ethically with colleagues, to effectively coordinate with other departments, to interact cordially with suppliers as well as the customers, and to maintain all these friendly interactions.

Alternatively, the service learning may be defined as the *non-paid activity*, in which service is provided on voluntary basis to the public (have-nots in the community), non-profitable institutions, and charitable organizations. It is the service during learning. This includes training or study on real life problems and their possible solutions, during the formal learning, i.e., courses of study. In the industrial scenario, adoption, study, and development of public health or welfare or safety system of a village or school is an example of service learning by the employees. The engineering student analyzing and executing a socially-relevant project is another example of service learning.

The service learning is a methodology falling under the category of experiential education[3]. It is one of the forms of experiential learning and community service opportunities. It is distinguished in the following ways:

1. *Connection to curriculum*: Integrating the learning into a service project is a key to successful service learning. Academic ties should be clear and built upon existing disciplinary skills.
2. *Learner's voice*: Beyond being actively engaged in the project, trainees have the opportunity to select, design, implement, and evaluate their service activity.
3. *Reflection*: Structured opportunities are created to think, talk, and write about the service experience. The balance of reflection and action allows the trainee to be constantly aware of the impact of their *work.*
4. *Partners in the community*: Partnership with community agencies are used to identify genuine needs, provide mentorship, and contribute input such as labor and expertise towards completing the project.

1.7   VIRTUES

Virtues are *positive* and *preferred* values. Virtues are desirable attitudes or character traits, motives and emotions that enable us to be successful and to act in ways that develop our highest potential. They energize and enable us to pursue the ideals that we have adopted. Honesty, courage, compassion, generosity, fidelity, integrity, fairness, transparency, self-control, and prudence are all examples of virtues.

Virtues are tendencies which include, solving problems through peaceful and constructive means and follow the path of the golden mean between the extremes of 'excess and deficiency'. They are like habits, once acquired, they become characteristics of a person. Moreover, a person who has developed virtues will naturally act in ways consistent with moral principles. The virtuous person is the ethical person.

1.7.1 Civic Virtues

Civic virtues are the moral duties and rights, as a citizen of the village or the country or an integral part of the society and environment. An individual may exhibit civic virtues by voting, volunteering, and organizing welfare groups and meetings.

The duties are:
1. To pay taxes to the local government and state, in time.
2. To keep the surroundings clean and green.
3. Not to pollute the water, land, and air by following hygiene and proper garbage disposal. For example, not to burn wood, tyres, plastic materials, spit in the open, even not to smoke in the open, and not to cause nuisance to the public, are some of the civic (duties) virtues.
4. To follow the road safety rules.

On the other hand, the rights are:
1. To vote the local or state government.
2. To contest in the elections to the local or state government.
3. To seek a public welfare facility such as a school, hospital or a community hall or transport or communication facility, for the residents.
4. To establish a green and safe environment, pollution free, corruption free, and to follow ethical principles. People are said to have the right to breathe in fresh air, by not allowing smoking in public.
5. People have inalienable right to accept or reject a project in their area. One has the right to seek legal remedy, in this respect, through public interest petition.

George Washington[4] embodied the civic virtues as indispensable for a self-governing administration. These virtues are divided into four categories:

1. Civic Knowledge

Citizens must understand what the Constitution says about how the government is working, and what the government is supposed to do and what not to do. We must understand the basis of our responsibilities as citizens, besides duties and rights. We must be able to recognize when the government or another citizen infringes upon our rights. It implies that the government requires the participation of the enlightened citizens, to serve and survive.

2. Self-Restraint

For citizens to live in a free society with limited government each citizen must be able to control or restrain himself; otherwise, we would need a police state—that is, a dictatorial government to maintain safety and order. He advocated for morality and declared that happiness is achieved and sustained through virtues and morals. He advocated and demonstrated self-restraint several times in his private and public life, and naturally he was a great leader.

3. Self-Assertion

Self-assertion means that citizens must be proud of their rights, and have the courage to stand up in public and defend their rights. Sometimes, a government may usurp the very rights that it was created to protect. In such cases, it is the right of the people to alter or abolish that government (e.g., voting rights, rights call back).

4. Self-Reliance

Citizens who cannot provide for themselves will need a large government to take care of them. Once citizens become dependent on government for their basic needs, the people are no longer in a position to demand that government act within the confines of the Constitution. Self-reliant citizens are free citizens in the sense that they are not dependent on others for their basic needs. They do not need a large provider-government, which has the potential to become an oppressive government, to meet those needs. Only a strong self-reliant citizenry will be able to enjoy fully the blessings of liberty. These civic virtues, applicable to local, state, and central governments, nourish freedom and civil liberty at the root of democracy.

1.8 RESPECT FOR OTHERS

This is a basic requirement for nurturing friendship, team work, and for the synergy it promotes and sustains. The principles enunciated in this regard are:

1. Recognize and accept the existence of other persons as human beings, because they have a right to live, just as you have.
2. Respect others' ideas (decisions), words, and labor (actions). One need not accept or approve or award them, but shall listen to them first. One can correct or warn, if they commit mistakes. Some people may wait and watch as fun, if one falls, claiming that they know others' mistakes before and know that they will fall! Appreciate colleagues and subordinates on their positive actions. Criticize constructively and encourage them. They are bound to improve their performance, by learning properly and by putting more efforts.
3. Show 'goodwill' on others. Love others. Allow others to grow. Basically, the goodwill reflects on the originator and multiplies itself on everybody. This will facilitate collinearity, focus, coherence, and strength to achieve the goals.

1.9 LIVING PEACEFULLY

To live peacefully, one should start install peace within (self). Charity begins at home. Then one can spread peace to family, organisation where one works, and then to the world, including the environment. Only who are at peace can spread peace. You can not gift an article which you do not possess. The

essence of oriental philosophy is that one should not *fight* for peace. It is oxymoron. War or peace can be won only by peace, and *not by wars !*

One should adopt the following means to live peacefully, in the world:

Nurture

1. Order in one's life (self-regulation, discipline, and duty).
2. Pure thoughts in one's soul (loving others, blessing others, friendly, and not criticizing or hurting others by thought, word or deed).
3. Creativity in one's head (useful and constructive).
4. Beauty in one's heart (love, service, happiness, and peace).

Get

5. Good health/body (physical strength for service).

Act

6. Help the needy with head, heart, and hands (charity). Service to the poor is considered holier than the service to God.
7. Not hurting and torturing others either physically, verbally, or mentally.

The following are the factors that promote living, with internal and external peace:

1. Conducive environment (safe, ventilated, illuminated and comfortable).
2. Secured job and motivated with 'recognition and reward'.
3. Absence of threat or tension by pressure due to limitations of money or time.
4. Absence of unnecessary interference or disturbance, except as guidelines.
5. Healthy labor relations and family situations.
6. Service to the needy (physically and mentally-challenged) with love and sympathy.

1.10 CARING

Caring is feeling for others. It is a process which exhibits the interest in, and support for, the welfare of others with fairness, impartiality and justice in all activities, among the employees, in the context of professional ethics. It includes showing respect to the feelings of others, and also respecting and preserving the interests of all others concerned. Caring is reflected in activities such as friendship, membership in social clubs and professional societies, and through various transactions in the family, fraternity, community, country and in international councils.

In the present day context, caring for the environment (including the *fauna and flora*) has become a necessity for our very survival. If we do not care for the environment, the environment will scare us.

1.11 SHARING

Primarily, caring influences 'sharing'. Sharing is a process that describes the transfer of knowledge (teaching, learning, and information), experience (training), commodities (material possession) and facilities with others. The transfer should be genuine, legal, positive, voluntary, and without any expectation in return. However, the proprietary information it should not be shared with outsiders. Through this process of sharing, experience, expertise, wisdom and other benefits reach more people faster. Sharing is voluntary and it can not be driven by force, but motivated successfully through ethical principles. In short, sharing is 'charity'

For the humanity, 'sharing' is a *culture*. The 'happiness and wealth' are multiplied and the 'crimes and sufferings' are reduced, by sharing. It paves the way for peace and obviates militancy. Philosophically, the sharing maximizes the happiness for all the human beings. In terms of psychology, the fear, divide, and distrust between the 'haves' and 'have-nots' disappear. Sharing not only paves the way to prosperity, early and easily, and sustains it. Economically speaking, benefits are maximized as there is no wastage or loss, and everybody gets one's needs fulfilled and satisfied. Commercially speaking, the profit is maximized. Technologically, the productivity and utilization are maximized by sharing.

In the industrial arena, code-sharing in airlines for bookings on air travels and the common Effluent Treatment Plant constructed for small-scale industries in the industrial estates, are some of the examples of sharing. The co-operative societies for producers as well as consumers are typical examples of sharing of the goods, profit and other social benefits.

Here is an anecdote that illustrates the benefits of sharing, for the young minds!

The shouting...the screaming...the fighting. That was the breaking point for me as I poured out my woes to my mother. "How can I get them to *share* as well as we did as kids?", I pleaded.

Laughter was her reply. "Well, thanks a lot, mom," I said. "I'm sorry," she chuckled, "but you didn't always share." She went on to explain about the "Box of Misbehaved Toys." Every time we fought over a toy, she would quietly take that and put it into the box.

Yes, I did remember that box. I also remember it wasn't always fair since one person may have caused all the commotion. But my mother was consistent. No matter what the reason for the struggle was, the toy disappeared into the box for one week. No questions asked, and no chance of parole. My siblings and I soon learned that sharing a toy was better than losing it. Often, one person would decide to just wait for a time when no one else was playing with the toy, rather than fight and lose it. It was not a perfect system, but I tried it anyway

That box was a shock to my kids and it was close to full, within a few days…..As the weeks progressed, I noticed the box was emptier and the arguing was less. Today, I heard quiet music to my ears as my son said to his sister, "That's OK, you can play with it."

This story illustrates the worthy joy of sharing as compared to the pain of losing.

1.12 HONESTY

Honesty is a virtue, and it is exhibited in two aspects namely,

      (*a*)   Truthfulness and
      (*b*)   Trustworthiness.

Truthfulness is to face the responsibilities upon telling truth. One should keep one's word or promise. By admitting one's mistake committed (one needs courage to do that!), it is easy to fix them. Reliable engineering judgment, maintenance of truth, defending the truth, and communicating the truth, only when it does 'good' to others, are some of the reflections of truthfulness. But trustworthiness is maintaining integrity and taking responsibility for personal performance. People abide by law and live by mutual trust. They play the right way to win, according to the laws or rules (legally and morally). They build trust through reliability and authenticity. They admit their own mistakes and confront unethical actions in others and take tough and principled stand, even if unpopular.

Honesty is mirrored in many ways. The common reflections are:

(*a*) Beliefs (intellectual honesty).
(*b*) Communication (writing and speech).

(*c*) Decisions (ideas, discretion).

(*d*) Actions (means, timing, place, and the goals). and

(*e*) Intended and unintended results achieved.

As against this, some of the actions of an engineer that leads to dishonesty are:

1. *Lying*: Honesty implies avoidance of lying. An engineer may communicate wrong or distorted test results intentionally or otherwise. It is giving *wrong* information to the *right* people.

2. *Deliberate deception*: An engineer may judge or decide on matters one is not familiar or with insufficient data or proof, to impress upon the customers or employers. This is a self deceit.

3. *Withholding the information*: It means hiding the facts during communication to one's superior or subordinate, intentionally or otherwise.

4. *Not seeking the truth*: Some engineers accept the information or data, without applying their mind and seeking the truth.

5. *Not maintaining confidentiality*: It is giving *right* information to *wrong* people. The engineers should keep information of their customers/clients or of their employers confidential and should not discuss them with others.

6. Giving professional judgment under the influence of extraneous factors such as personal benefits and prejudice. The laws, experience, social welfare, and even conscience are given a go-bye by such actions. Certainly this is a higher-order crime.

1.13 COURAGE

Courage is the tendency to accept and face risks and difficult tasks in rational ways. Self-confidence is the basic requirement to nurture courage.

Courage is classified into three types, based on the types of risks, namely

(*a*) Physical courage,

(*b*) Social courage, and

(*c*) Intellectual courage. In physical courage, the thrust is on the adequacy of the physical strength, including the muscle power and armaments. People with high adrenalin, may be prepared to face challenges for the mere 'thrill' or driven by a decision to 'excel'. The social courage involves the decisions and actions to change the order, based on the conviction for or against certain social behaviors. This requires leadership abilities, including empathy and sacrifice, to mobilize and motivate the followers, for the social cause. The intellectual courage is inculcated in people through acquired knowledge, experience, games, tactics, education, and training. In professional ethics, courage is applicable to the employers, employees, public, and the press.

Look before you leap. One should perform Strengths, Weakness, Opportunities, and Threat (SWOT) analysis. Calculate (estimate) the risks, compare with one's strengths, and anticipate the end results, while taking decisions and before getting into action. Learning from the past helps. Past experience (one's own or borrowed!) and wisdom gained from self-study or others will prepare one to plan and act

with self-confidence, succeed in achieving the desired ethical goals through ethical means. Opportunities and threat existing and likely to exist in future are also to be studied and measures to be planned. This anticipatory management will help any one to face the future with courage.

Facing the criticism, owning responsibility, and accepting the mistakes or errors when committed and exposed are the expressions of courage. In fact, this sets their mind to be vigilant against the past mistakes, and creative in finding the alternate means to achieve the desired objectives. Prof. Sathish Dhawan, Chief of ISRO, was reported to have exhibited his courage and owned responsibility, when the previous space mission failed, but credited Prof. A.P.J. Abdul Kalam (now our revered President), when the subsequent mission succeeded.

The courageous people own and have shown the following characteristics, in their professions:
- (*a*) Perseverance (sustained hard work),
- (*b*) Experimentation (preparedness to face the challenges, that is, unexpected or unintended results),
- (*c*) Involvement (attitude, clear and firm resolve to act), and
- (*d*) Commitment (willing to get into action and to reach the desired goals by any alternative but ethical means).

1.14 VALUING TIME

Time is rare resource. Once it is spent, it is lost for ever. It can not be either stored or recovered. Hence, time is the most perishable and most valuable resource too. This resource is continuously spent, whether any decision or action is taken or not.

The history of great reformers and innovators have stressed the importance of time and valuing time. The proverbs, 'Time and tide wait for nobody' and 'Procrastination is the thief of time' amply illustrate this point.

An anecdote to highlight the 'value of time' is as follows: To realize the value of one year, ask the student who has failed in the examinations;. To realize the value of one month, ask the mother who has delivered a premature baby; to realize the value of one week, ask the editor of weekly; to realize the value of one day, ask the daily-wage laborer; to realize now the value of one hour, ask the lovers longing to meet; to realize the value of one minute, ask a person who has missed the train; to realize the value of one second, ask the person who has survived an accident; to realize the value one milli second, ask the person who has won the bronze medal in Olympics; to realize the value of one micro second, ask the NASA team of scientists; to realize the value of one nano-second, ask a Hardware engineer!; If you have still not realized the value of time, wait; are you an Engineer?

1.15 COOPERATION

It is a team-spirit present with every individual engaged in engineering. Co-operation is activity between two persons or sectors that aims at integration of operations (synergy), while not sacrificing the autonomy of either party. Further, working together ensures, coherence, i.e., blending of different skills required, towards common goals.

Willingness to understand others, think and act together and putting this into practice, is cooperation. Cooperation promotes collinearity, coherence (blend), co-ordination (activities linked in sequence or

priority) and the synergy (maximizing the output, by reinforcement). The whole is more than the sum of the individuals. It helps in minimizing the input resources (including time) and maximizes the outputs, which include quantity, quality, effectiveness, and efficiency.

According to professional ethics, cooperation should exist or be developed, and maintained, at several levels; between the employers and employees, between the superiors and subordinates, among the colleagues, between the producers and the suppliers (spare parts), and between the organisation and its customers.

The codes of ethics of various professional societies insist on appropriate cooperation to nourish the industry. The absence of cooperation leads to lack of communication, misinformation, void in communication, and undue delay between supply, production, marketing, and consumption. This is likely to demoralize and frustrate the employees, leading to collapse of the industry over time and an economic loss to the society.

The impediments to successful cooperation are:

1. Clash of ego of individuals.
2. Lack of leadership and motivation.
3. Conflicts of interests, based on region, religion, language, and caste.
4. Ignorance and lack of interest. By careful planning, motivation, leadership, fostering and rewarding team work, professionalism and humanism beyond the 'divides', training on appreciation to different cultures, mutual understanding 'cooperation' can be developed and also sustained.

1.16 COMMITMENT

Commitment means *alignment to goals and adherence to ethical principles during the activities*. First of all, one must believe in one's action performed and the expected end results (confidence). It means one should have the conviction without an iota of doubt that one will succeed. Holding sustained interest and firmness, in whatever ethical means one follows, with the fervent attitude and hope that one will achieve the goals, is commitment. It is the driving force to realize success.

This is a basic requirement for any profession. For example, a design engineer shall exhibit a sense of commitment, to make his product or project designed a beneficial contribution to the society. Only when the teacher (Guru) is committed to his job, the students will succeed in life and contribute 'good' to the society. The commitment of top management will naturally lead to committed employees, whatever may be their position or emoluments. This is bound to add wealth to oneself, one's employer, society, and the nation at large.

1.17 EMPATHY

Empathy is social radar. Sensing what others feel about, without their open talk, is the essence of empathy. Empathy begins with showing concern, and then obtaining and understanding the feelings of others, from others' point of view. It is also defined as the ability to put one's self into the psychological frame or reference or point of view of another, to know what the other person feels. It includes the imaginative projection into other's feelings and understanding of other's background such as parentage, physical and mental state, economic situation, and association. This is an essential ingredient for good human relations and transactions.

To practice 'Empathy', a leader must have or develop in him, the following characteristics[5]

1. *Understanding others*: It means sensing others feelings and perspectives, and taking active interest in their welfare.

2. *Service orientation*: It is anticipation, recognition and meeting the needs of the clients or customers.

3. *Developing others*: This means identification of their needs and bolstering their abilities. In developing others, the one should inculcate in him the 'listening skill' first.

   Communication = 22% reading and writing + 23% speaking + 55% listening

   One should get the feed back, acknowledge the strength and accomplishments, and then coach the individual, by informing about what was wrong, and giving correct feedback and positive expectation of the subject's abilities and the resulting performance.

4. *Leveraging diversity* (opportunities through diverse people): This leads to enhanced organizational learning, flexibility, and profitability.

5. *Political awareness*: It is the ability to read political and social currents in an organization.

The benefits of empathy include:

1. Good customer relations (in sales and service, in partnering).

2. Harmonious labor relations (in manufacturing).

3. Good vendor-producer relationship (in partnering.) Through the above three, we can maximize the output and profit, as well as minimizing the loss. While dealing with customer complaints, empathy is very effective in realising the unbiased views of others and in admitting one's own limitations and failures. According to Peter Drucker, purpose of the business is not to *make a sale*, but to *make and keep a customer*. Empathy assists one in developing courage leading to success!

1.18 SELF-CONFIDENCE

Certainty in one's own capabilities, values, and goals, is self-confidence. These people are usually positive thinking, flexible and willing to change. They respect others so much as they respect themselves.

Self-confidence is positive attitude, wherein the individual has some positive and realistic view of himself, with respect to the situations in which one gets involved. The people with self-confidence exhibit courage to get into action and unshakable faith in their abilities, whatever may be their positions. They are not influenced by threats or challenges and are prepared to face them and the natural or unexpected consequences.

The self-confidence in a person develops a sense of partnership, respect, and accountability, and this helps the organization to obtain maximum ideas, efforts, and guidelines from its employees. The people with self-confidence have the following characteristics:

1. A self-assured standing,

2. Willing to listen to learn from others and adopt (flexibility),

3. Frank to speak the truth, and

4. respect others' efforts and give due credit.

On the contrary, some leaders expose others when failure occurs, and own the credit when success comes.

The factors that shape self-confidence in a person are:

1. Heredity (attitudes of parents) and family environment (elders),
2. Friendship (influence of friends/colleagues),
3. Influence of superiors/role models, and
4. Training in the organization (e.g., training by Technical Evangelists at Infosys Technologies).

The following methodologies are effective in developing self-confidence in a person:

1. Encouraging SWOT analysis. By evaluating their strength and weakness, they can anticipate and be prepared to face the results.
2. Training to evaluate risks and face them (self-acceptance).
3. Self-talk . It is conditioning the mind for preparing the self to act, without any doubt on his capabilities. This make one accepts himself while still striving for improvement.
4. Study and group discussion, on the history of leaders and innovators (e.g., Sam Walton of Wal-Mart, USA).

1.19 CHALLENGES IN THE WORK PLACE

The biggest workplace challenge is said to be the employee's work ethics: showing up to work every day (interest in work and attendance), showing up to work on time (punctuality), taking pride in the quality of their work, commitment to the job, and getting along with others. This situation demands inculcation of good character in the workplace by employees.

1.19.1 Character

It is a characteristic property that defines the behavior of an individual. It is the pattern of virtues (morally-desirable features). Character includes attributes that determine a person's moral and ethical actions and responses. It is also the ground on which morals and values blossom.

People are divided into several categories, according to common tendencies such as ruthless, aggressiveness, and ambition, constricting selfishness, stinginess, or cheerfulness, generosity and goodwill. Individuals vary not only in the type of their character but also in the degree. Those whose lives are determined and directed by the prevailing habits, fashions, beliefs, attitudes, opinions and values of the society in which they live have at best a developed *social* as opposed to an *individual* character.

The character is exhibited through conduct. Character is determined by the expectations of society. Many act and live within its norms, refusing to fall below the required social minimum, failing to rise above the maximum expected of a normal member of the group. On one extreme are those that do not even conform to the minimum standards, and fail to acquire the socially-required behaviors, attitudes and values. These individuals have an unformed social character. At the other extreme are those whose beliefs, attitudes and values are determined internally by the strength of their own convictions. These are individuals with developed minds and formed characters of their own.

Individuals do not live or act in a vacuum. They exist and act in a human social environment of other people that constantly act on them and react to their actions. They also live in a natural environment of physical objects and material forces such as the winds and rains. And those with occult and spiritual

traditions recognize that there is also a subtle environment of other planes of existence, both higher planes of spiritual influence and lower planes of negative forces in universal nature seeking to act on the lives. All of the social, material and the occult planes constitute the field of human activity. Each of them functions according to its own laws or principles. Each of them has its own characteristic modes of action and influence on human life.

Character is the expression of the personality of a human being, and that it reveals itself in one's conduct. In this sense every human has a character. At the same time only human beings, not animals have character: it implies rationality. But in addition to this usage, the term is also employed in a narrower sense, as when we speak of a person "of character". In this connotation, character implies certain unity of qualities with a recognizable degree of *constancy* in mode of action. Psychology analyzes the elements of character to trace the laws of its growth, to distinguish the chief agencies which contribute to the formation of different types of character, and to classify them. Many psychologists world over, during the last 40 years have given a large quantity of acute observations on the topic of character. Still these contributions do not constitute a science.

1.19.2 The Four Temperaments[5]

The original endowment or native element in character with which the individual starts life is practically identical with what the Ancients recognized as *temperament.* From the times of Hippocrates, they distinguished four main types of temperaments: the Sanguine, the Choleric, the Phlegmatic, and the Melancholic. The modern speculation accepts the same classification, but under other names. These different types of temperaments are accounted for differences in physiological conditions of the tissues of the body, by diverse rates of activities in the processes of nutrition and waste, in the changes of nerve-energy, or in circulation, and by differences of tonicity in the nerves. Irrespective of the physiological explanation, the four-fold classification seems to be fair. Moreover, though scientists are still far from agreeing upon the precise elements in the organism on which temperament depends, the fact that different forms of temperaments have an organic basis such as *hormones* seems certain. Although our original temperament is given to us independently of our will by heredity, we play an important part in moulding our character, and we thus become responsible for certain ethical qualities in it.

Character has been defined as "*natural temperament completely fashioned by the will*". It is, in fact, a resultant of our acquired habits with our original disposition. The regular use of the intellect, the controlled activity of the imagination, the practice of judgment and reflection, all contribute to the formation and refinement of habits of mind. The frequent indulgence in particular forms of emotion, such as anger, envy, sympathy, melancholy, fear, and the like, fosters tendencies towards these sentiments which give a subconscious bent to a large part of man's behavior. But finally, the exercise of the will plays the predominant role in moulding the type of character. The manner and degree in which currents of thought and waves of emotion are initiated, guided, and controlled by the will, or allowed to follow the course of spontaneous impulse, has more effect in determining the resultant type of character than the quality of the thoughts or emotions themselves.

The life of the animal is entirely ruled by instinct from within, and by accidental circumstances from without. It is therefore incapable of acquiring a character. A human, through reasoning and the growth of reflection, by the exercise of choice against the impulse, gradually develops self-control; and it is by the exercise of this power that moral character is formed and reformed. Character is in fact

the outcome of a series of volitions, and it is for this reason we are responsible for our characters, as we are for the individual habits which go to constitute them.

1.19.3 Types of Character

From the four fundamental temperaments, various classifications of character have been adopted by different psychologists. The intellectual, the emotional, and the volitional or energetic are the chief types with A. Bain. M. Pérez, based on the phenomenon of movement, distinguishes characters as lively, slow, ardent, and well-balanced. M. Ribot, with more subjective division and excluding indefinite types as 'characterless', recognizes the forms as:

    (*a*) the sensitive (humble, contemplative and emotional,

    (*b*) the active (great and the mediocre), and

    (c) the apathetic (purely apathetic or dull), and

    (*d*) the intelligent.

1.19.4 Ethics and Character

Whilst psychology investigates the growth of different types of character, ethics considers the relative value of such types and the virtues which constitute them. The problem of the true moral ideal is a question of the relative value of different types of character. The effect on the person's character of a particular form of conduct is a universally accepted as a test of its moral quality. Different systems of ethics emphasize different virtues in constituting the ideal moral character. With the utilitarian, who places the ethical end in the maximum happiness for the whole community, *benevolence* will form the primary element in the ideal character. For the stoic, fortitude and *self-control* are the chief excellences.

In all conceptions of ideal character, firmness of will, fortitude, constancy in adhering to principle or in pursuit of a noble aim are held important. A man of character is frequently equivalent to being capable of adhering to a fixed purpose. Another essential is the virtue of justice, the recognition of the rights, duties, and claims of others. The richer the culture of the mind, the larger the intellectual horizon, the broader the sympathies, the more will the character approximate to the ideal of human perfection.

1.19.5 Education and Character

The aim of education is not only the cultivation of the intellect but also the formation of moral character. Increased intelligence or physical skill may as easily be employed to the detriment or benefit of the community, if not accompanied by improved will. It is the function of ethics to determine the ideals of human character. The theory and science of education are to study the processes by which that end may be attained.

1.19.6 Building Character in the Workplace

Managers have to influence and employ creative means of stressing the importance of good character in the workplace, in the following ways[6,7]:

1. *Employee Hiring, Training, and Promotion Activities*

    (*a*) Institute and adopt an organization policy statement to positive character in the workplace. For example, commitment to civility pledges. This may be communicated through printing on the back of the business cards of the employees.

(*b*) Prominently and explicitly include character considerations in recruiting procedures, during interviews and in the hiring deliberations.

(*c*) Emphasize the importance of character and adherence to the 'six pillars' of character in orientation, initial job training, and during in-service training. The six pillars of character are the ethical values, such as: trustworthiness, respect, responsibility, fairness, caring and citizenship. Respect means showing high regard for self, others, authority, property and country. It includes showing appreciation for cultural diversity by valuing all people as human beings. Responsibility is

  (*i*) being accountable for one's actions,

 (*ii*) being dependable in carrying out obligations and duties,

(*iii*) being reliable and consistent in word and action, and

(*iv*) being committed to community development. Integrity or fairness means showing the inner strength and courage to be truthful, trustworthy, fair and honest in all things. It includes acting justly and honorably. Caring means being kind, considerate, courteous, helpful, friendly and generous to others, and being compassionate by treating others as you would like to be treated. Citizenship means accepting and adopting civic rights and duties as a citizen of the country.

(*d*) Include evaluation of fundamental character values such as honesty, promise keeping, accountability, fairness, and caring, in appraisals/reviews.

(*e*) Institute recognition and reward system for the employees who exemplify the positive character. for example, awards and medals.

(*f*) Think of your employees, especially the younger ones, as people whose personal and work values will be influenced by what you expect of them and how you treat them.

(*g*) Think of your employees as present or future mentors, coaches, and volunteers.

2. Internal Communication

Use internal communication channels to create a friendly environment that praises positive role modeling at the workplace and in the community by encouraging voluntarism, and mentoring, e.g., through

(*a*) Internal newsletters,

(*b*) Workplace posters in canteens and recreation rooms,

(*c*) Mailers, and

(*d*) Electronic mails.

3. External Communication

In relations with customers, vendors and others, consciously communicate affirming messages about character and ethics, such as

(*a*) Advertise and market honoring consensual values (the six pillars),

(*b*) Assure that none of your products and services undermines character building,

(*c*) Include positive messages about voluntarism and celebrate, and

(*d*) 'Character counts' week in advertising, billings and other mailers.

4. Financial and Human Resources

(*a*) Support local and national 'character' projects and the activities of the members by encouraging staff members to get involved. Offer incentives such as paying employees for the time they contribute at a local youth-service organization.

(*b*) Sponsor 'character' movement through financial support.

5. Community Outreach

(*a*) Use public outreach structures to encourage mentoring and other character-building programs.

(*b*) Encourage educational and youth organizations to become active in character building.

(*c*) Use corporate influence to encourage business groups (chambers of commerce, conference boards, and Rotary clubs) and other companies to support 'character' building.

1.20 SPIRITUALITY

Spirituality is a way of living that emphasizes the constant awareness and recognition of the spiritual dimension (mind and its development) of nature and people, with a dynamic balance between the material development and the spiritual development. This is said to be the great virtue of Indian philosophy and for Indians. Sometimes, spirituality includes the faith or belief in supernatural power/ God, regarding the worldly events. It functions as a fertilizer for the soil 'character' to blossom into values and morals.

Spirituality includes creativity, communication, recognition of the individual as human being (as opposed to a life-less machine), respect to others, acceptance (stop finding faults with colleagues and accept them the way they are), vision (looking beyond the obvious and not believing anyone blindly), and partnership (not being too authoritative, and always sharing responsibility with others, for better returns).

Spirituality is motivation as it encourages the colleagues to perform better. Remember, lack of motivation leads to isolation. Spirituality is also energy: Be energetic and flexible to adapt to challenging and changing situations. Spirituality is flexibility as well. One should not be too dominating. Make space for everyone and learn to recognize and accept people the way they are. Variety is the order of the day. But one can influence their mind to think and act together. Spirituality is also fun. Working is okay, but you also need to have fun in office to keep yourself charged up. Tolerance and empathy are the reflections of spirituality. Blue and saffron colors are said to be associated with spirituality.

Creativity in spirituality means conscious efforts to see things differently, to break out of habits and outdated beliefs to find new ways of thinking, doing and being. Suppression of creativity leads to violence. People are naturally creative. When they are forced to crush their creativity, its energy turns to destructive release and actions. Creativity includes the use of color, humor and freedom to enhance productivity. Creativity is fun. When people enjoy what they do, it is involvement. They work much harder.

1.20.1 Spirituality in the Workplace

Building spirituality in the workplace: Spirituality is promoted in the workplace by adhering to the following activities:

1. Verbally respect the individuals as humans and recognize their values in all decisions and actions.

2. Get to know the people with whom you work and know what is important to them. Know their goals, desires, and dreams too.
3. State your personal ethics and your beliefs clearly.
4. Support causes outside the business.
5. Encourage leaders to use value-based discretion in making decisions.
6. Demonstrate your own self-knowledge and spirituality in all your actions.
7. Do unto others as you would have them do unto you.

1.20.2 Sprituality for Corporate Excellence[8]

The spiritual traits to be developed for excellence in corporate activities are listed as follows:

1. *Self-awareness* — Realization of self-potential. A human has immense capability but it needs to be developed.
2. *Alertness in observation and quickness in decision making*, i.e., spontaneity which includes quick reflexes, no delay but also no hasty decisions.
3. *Being visionary and value based* — This includes an attitude towards future of the organization and the society, with clear objectives.
4. *Holism* — Whole system or comprehensive views and interconnected with different aspects. Holistic thinking, which means the welfare of the self, family, organization and the society including all other living beings and environment.
5. *Compassion* — Sympathy, empathy and concern for others. These are essential for not only building the team but also for its effective functioning.
6. *Respect for diversity* — It means search for unity in diversity i.e., respect others and their views.
7. *Moral Autonomy* — It means action based on rational and moral judgment. One need not follow the crowd or majority i.e., band-wagon effect.
8. *Creative thinking and constant reasoning* — Think if we can do something new and if we can improve further?
9. *Ability to analyze and synthesize* — Refrain from doing something only traditional.
10. *Positive views of adversity* — Make adversities one's source of power—a typical Karma yogi's outlook! Every threat is converted into opportunity.
11. *Humility* — The attitude to accept criticism (it requires courage!) and willing to correct. It includes modesty and acknowledging the work of colleagues.
12. *Sense of vocation* — Treat the duty as a service to society, besides your organization.