

## **MODELS OF PROFESSIONAL ROLES**

Promotion of public good is the primary concern of the professional engineers. There are several role models to whom the engineers are attracted. These models provoke their thinking, attitudes and actions.

### **1. Savior**

The engineer as a savior, save the society from poverty, illiteracy, wastage, inefficiency, ill health, human (labor) dignity and lead it to prosperity, through technological development and social planning. For example, R.L. Stevenson.

### **2. Guardian**

He guards the interests of the poor and general public. As one who is conversant with technology development, is given the authority befitting his expertise to determine what is best suited to the society. For example, Lawrence of Arabia (an engineer).

### **3. Bureaucratic Servant**

He serves the organization and the employers. The management of an enterprise fixes its goals and assigns the job of problem solving to the engineer, who accepts the challenge and shapes them into concrete achievements. For example, Jamshedji Tata.

### **4. Social Servant**

It is one who exhibits social responsibility. The engineer translates the interest and aspirations of the society into a reality, remembering that his true master is the society at large. For example, Sir M. Viswesvarayya.

### **5. Social Enabler and Catalyst**

One who changes the society through technology. The engineer must assist the management and the society to understand their needs and make informed decisions on the desirable technological development and minimize the negative effects of technology on people and their living environment. Thus, he shines as a social enabler and a catalyst for further growth. For example, Sri Sundarlal Bahuguna.

### **6. Game Player**

He is neither a servant nor master. An engineer is an assertive player, not a passive player who may carry out his master's voice. He plays a unique role successfully within the organization, enjoying the excitement of the profession and having the satisfaction of surging ahead in a competitive world. For example, Narayanamurthy, Infosys and Dr. Kasthurirangan, ISRO.

## RESPONSIBILITY

There are different senses of responsibility, such as:

### *1. Characteristic Quality*

Primarily responsibility implies duty with care and efforts.

### *2. Obligations*

These are one's moral responsibility i.e., duty to act right and in moral ways. The obligations such as honesty, fairness, and decency are incumbent on every one. In addition to this, we have role responsibilities assigned by taking up various roles, such as parents, inspectors, and employees. For example, a Safety Engineer has a responsibility to make regular inspections in a factory shops.

### *3. General Moral Capacity*

One has the general capacity for moral agency, including the understanding and action on moral reasons.

### *4. Liability and Accountability*

Liability and Accountability for actions. It means that one is liable (with a legal sense) to meet the obligations in better ways. The person is likely to respond legally, if necessary.

Accountable means that one is willing to justify or defend the decisions, actions or means and outcomes. It could include offering a reasonable excuse or accepting the shame for not having met the end results or accepting the guilt for harming others. One is also answerable to the assessment by others on one's actions (means) or outcomes.

### *5. Praiseworthiness/Blameworthiness*

When accountability for wrong actions or results is at issue, responsibility means blameworthy.

## **Different types of responsibilities exhibited in human transactions are:**

### ***1. Moral Responsibility***

Moral responsibility as applied to a professional: A professional must be responsible morally, in creating internal good or good outcomes, and eliminating /minimizing unintended side-effects, from engineering and technology. It includes:

- (a) *Obligations*: A commitment to moral actions (primary obligation to protect the safety of the human beings and respect their rights),
- (b) *Conscientious*: A comprehensive perspective to accept the duties, and diligently do the right things by putting their heart, head and hands (awareness of the experimental nature of the product/project, anticipating possible and unexpected outcomes and putting efforts to monitor them),
- (c) Accountability (being accountable for the decisions, actions, and the results of product/ project including safety), and
- (d) Praiseworthy/Blameworthy as applied to context of doing things right/doing things wrongly, respectively.

### ***2. Causal Responsibility***

It is being a cause of some event. For example, a child playing with matches cause a house to burn. The child is causally responsible, but the parent who left the child with matches, is morally responsible.

### ***3. Job Responsibility***

It consists of assigned tasks at the place of employment and achieving the objectives.

### ***4. Legal Responsibility***

It is the response required by law and includes legal obligations and accountability to meet them. Many of these responsibilities overlap with moral responsibility.

## RESPONSIBLE PROFESSIONALISM

The most comprehensive virtue of engineers is responsible professionalism. It can also be called Professional Responsibility. This consists of five types of virtues, as follows:

1. Self-direction (Self-governance) virtues are fundamental and necessary in exercising moral responsibility. On the basis of 'understanding and cognition', it includes self-understanding, humility (proper assessment of one's character), and good moral judgment (termed as 'practical wisdom' by Aristotle). On the basis of 'commitment and action', it covers courage, self-discipline, perseverance, self-respect, and integrity. Honesty a virtue common to both bases as it implies truthfulness in thoughts and words and trustworthiness in actions.

2. Public-spirited virtues focus on the good of the clients and the public. It includes the respect for rights (to make decisions and face the risk), non-maleficence (not harming others intentionally). Engineering codes go a step further and prescribe beneficence that includes preventing or removing harm to others and also promoting the public safety, health, and welfare, generosity (helping the community by voluntarily giving their time, talent, and money-voluntary service to the professional society and community), and justice (unbiased) in all decisions and actions.

3. Team-work virtues enable the professionals to work successfully with others. They include collegiality, cooperativeness, communicative ability, and respect for legitimate authority. Responsible exercise of authority and the ability to motivate other to achieve are also the relevant to team-work virtues.

4. Proficiency virtues, which mean the mastery of technical skills (called as Intellectual Virtue by Aristotle). It includes competence (having qualified, licensed, and prepared to execute the job that is undertaken), diligence (alert to dangers, careful attention, and avoidance of laziness or workaholic nature), creativity (learning to respond to the changing technological society), excellence (perform at the highest level), and self-renewal through continuing education

