

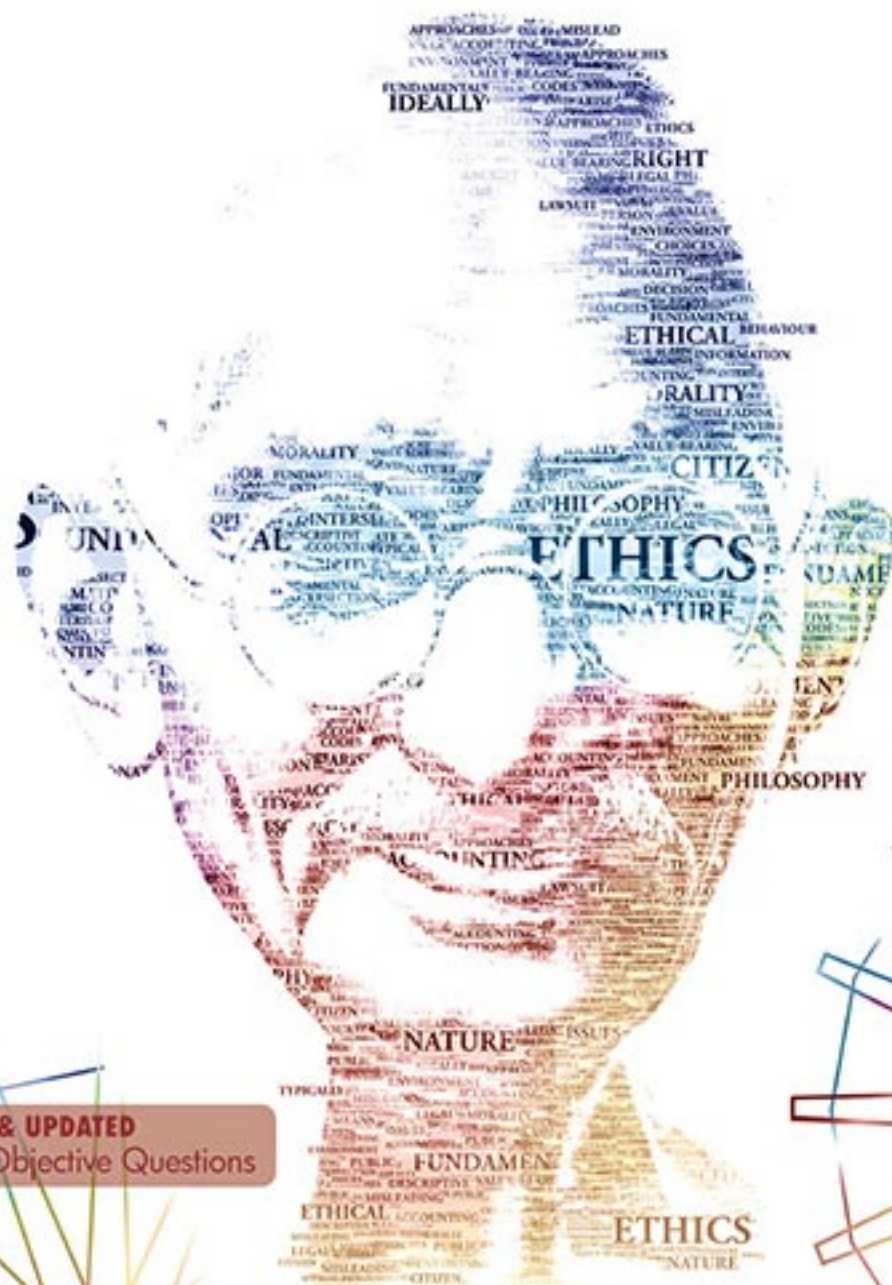
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First Edition : 2016
Second Edition : 2017

Preface

Preface to IInd Edition

“Do What is Right, Not What is Easy”

Ethics in engineering practice is about Professional responsibilities of engineers and the moral skills required to fulfill them. Engineering Ethics is an introductory textbook that explores many of the ethical issues that a practicing engineer might encounter in the course of his/her professional engineering practice.

Many factors are responsible if a disaster takes place in an engineering project which includes overconfidence, negligence, poor maintenance etc. Most of the disaster can be prevented if necessary code of ethics is followed which tells about the roles and responsibilities of an engineer. For these purpose several ethical codes were established. The main purpose of these ethical codes is to ensure public safety and welfare.

Ethics is understanding of human character and values. Values provide a unique, personal and moral template to assess the intentions and action of ourselves and others. It also distinguishes the right from the wrong.

This book contains a discussion on ethical theories, professional ethics, Principles of ethics, Human values and psychology from the engineering point of view. This book also highlights the moral issues and dilemmas faced by an engineer in an organization. Global issues such as Environmental ethics, Intellectual Property Rights (IPRs), Computer ethics and internet etc. are also discussed in brief.

To acclimatize the students with engineering ethics and to build analytical and reasoning skills to solve the problems, more than 250+ questions has been designed for practice and grasping the essence of Engineering ethics.

I am heartily grateful to my colleague **Adesh Jain** for his contribution in generating, shaping, editing and production of this book.

Any constructive suggestion for improving the content will be greatly appreciated.

Ashutosh Pandey
IES Master Publication
New Delhi, 2017



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OBJECTIVE QUESTIONS

1. **Assertion (A):** Engineers should have knowledge of ethical dimensions of engineering
Reason (R): Engineering rules do not encompass every situation often the rules only set limits within which decision must to be made.
 - (a) Both (A) & (R) are individually true, and (R) correctly option (A).
 - (b) Both (A) & (R) individually true, but (R) does not explain (A).
 - (c) A is True, R is False
 - (d) A is False, R is true
2. **Assertion (A):** Most of firms and companies like to hire ethically trained Engineer .
Reason (R): Ethically trained Engineer are more marketable.
 - (a) Both (A) & (R) are individually true, and (R) correctly option (A).
 - (b) Both (A) & (R) individually true, but (R) does not explain (A).
 - (c) A is True, R is False
 - (d) A is False, R is true
3. An engineer designs a small structural steel building for a client, using pirated structural design software obtained from the Internet. The engineer later learns that the software gives accurate stress analysis for tension, but does not properly predict buckling of columns in compression. The computer program is patched, and a revised analysis shows that the building is not as safe as first believed. An extreme snowfall could cause the supporting columns to buckle, and the building might collapse completely. Such a severe snowfall occurs about once every 10 years. What should the engineer do?
 - (a) Destroy all evidence of the revised analysis and hope for good weather.
 - (b) Contact the client, disclose the problem and tell the client to sue the software developer.
 - (c) Hire a good defence lawyer for the Association's disciplinary hearing against the engineer for negligence and unprofessional conduct.
 - (d) Contact the client, disclose the problem, and try to negotiate a way to reinforce the columns.
4. Consider the following statements regarding definition of 'moral':
 1. Being or acting in accordance with standards and precepts of goodness
 2. Arising from conscience or a sense of right and wrong
 3. A concisely expressed precept or general truth, a maxim
 4. The principles of conduct governing an individual or a profession, standards of behaviourWhich of the above statements are correct?
 - (a) 1, 2, 3 and 4
 - (b) 1, 2 and 4 only
 - (c) 3 and 4 only
 - (d) 1, 2 and 3 only
5. Engineering ethics applies the general definition of ethics to situations involving
 - (a) engineer's social lives
 - (b) engineer's interpersonal lives
 - (c) workplace behaviours of engineers
 - (d) All of the above
6. Which is/are the levels of study of ethics?
 1. At the level of individual
 2. At the level of engineering
 3. At the level of Government
 4. At the level of society
 - (a) only 1, 2 and 3
 - (b) only 2, 3 and 4
 - (c) only 1, 2 and 4
 - (d) All of the above
7. Select the common values between public and private sector:
 1. Honesty
 2. Commitment
 3. Quality and Design
 4. Public interest
 - (a) only 1 and 2
 - (b) only 1 and 3
 - (c) only 3 and 4
 - (d) All of the above
8. Which of the following does not constitute the foundation of ethics?

- (a) Honesty (b) Justice
(c) Integrity (d) Courtesy
9. What refers to situations in which moral reasons come into conflict, or in which the application of moral values is problematic?
(a) Silo mentality (b) Preventive ethics
(c) Ethical issues (d) Moral dilemmas
10. Ethics is synonymous to .
(a) Morality
(b) Money
(c) Standards
(d) Conduct
11. The general and abstract concepts of right and wrong behavior culled from philosophy, theology, and professional societies
(a) Ethics
(b) Morals
(c) Etiquette
(d) Law
12. "We wish to be good citizens of every community in which we operate." This is
(a) Ethical Code
(b) Political and Social Code
- (c) Legal Rule
(d) Legal Act
13. The ethical dilemma of choosing between two rights refers to
(a) Choosing between the lesser of two evils
(b) Deciding which of two employee rights is the most important
(c) Deciding to offer a bribe or lose out on an important opportunity
(d) Choosing between the two types of sexual harassment
14. Who said : "Ethics deals with the right actions of individuals."
(a) Peter F. Drucker
(b) C.S. Rao
(c) J.R. Betty
(d) D.C. Zahe
15. The cultural, organizational, community, interpersonal, or personal dynamics that should be considered when making ethical and professional issues are referred to as:
(a) Personal considerations.
(b) Contextual considerations.
(c) Environmental considerations.
(d) Ethical considerations.

ANSWERS

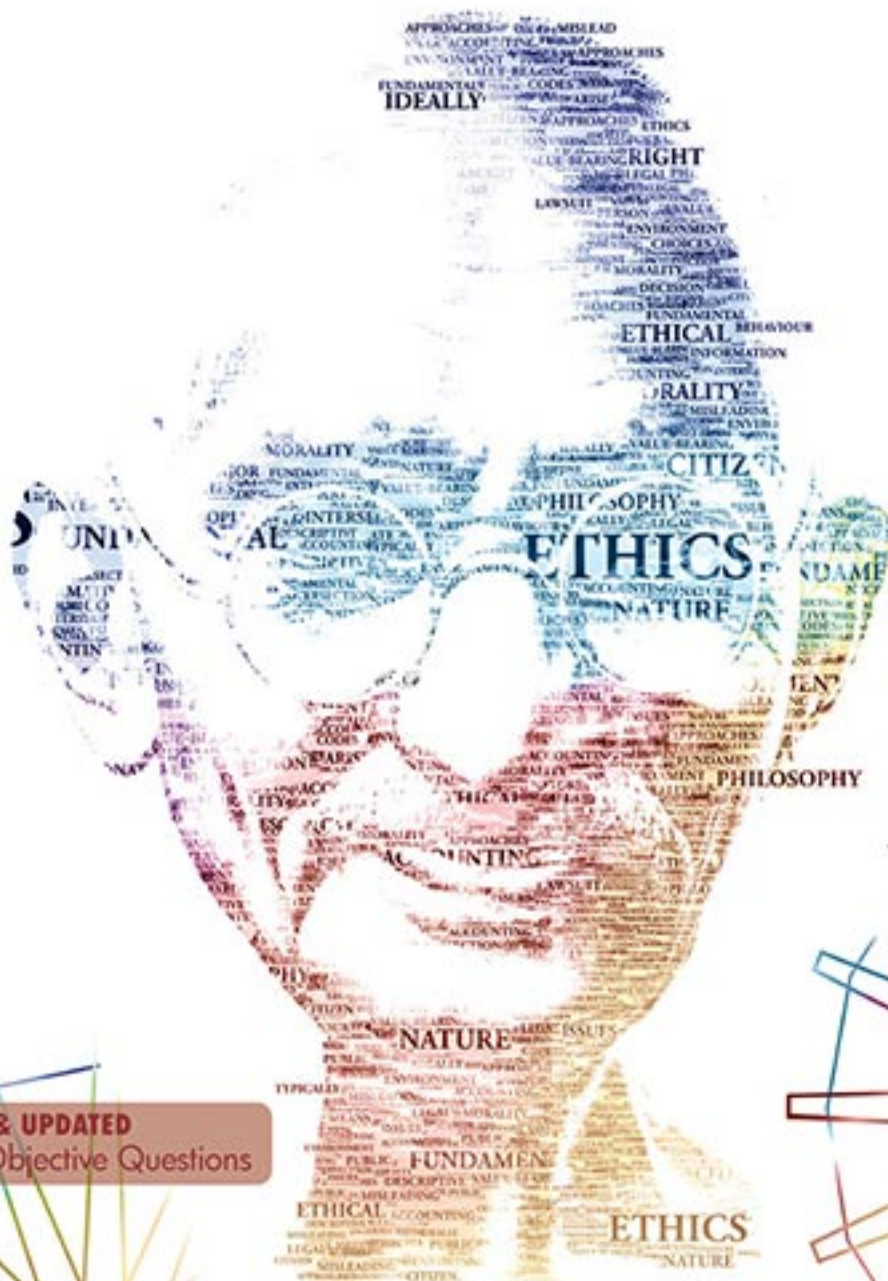
1. (a)	4. (d)	7. (a)	10. (a)	13. (a)
2. (a)	5. (c)	8. (d)	11. (a)	14. (a)
3. (d)	6. (c)	9. (d)	12. (a)	15. (b)

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