



GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY

Faculty of Engineering
Department of Civil Engineering

B.Sc. Engineering Degree
Semester 5 Examination – May 2024
(Intake 39 - All)

CE 3142 – PROFESSIONAL ETHICS

Time allowed: 3 Hours

16 May 2024

INSTRUCTIONS TO CANDIDATES

This paper contains 5 questions on 4 pages

Answer ALL questions

This is a closed book examination

This examination accounts for 70% of the module assessment. The marks assigned for each question and parts thereof are indicated in square brackets

If you have any doubt as to the interpretation of the wordings of a question, make your own decision, but clearly state it on the script

Assume reasonable values for any data not given in or provided with the question paper, clearly make such assumptions made in the script

All examinations are conducted under the rules and regulations of the KDU

DETAILS OF ASSESSMENT

Learning Outcome (LO)	Questions that assess LO	Marks allocated (Total 100%)
LO1	Q1, Q2, Q5	22
LO2	Q1, Q2, Q3, Q4	42
LO3	Q3, Q4, Q5	23
LO4	Q4, Q5	13
TOTAL		100

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Question 1

- a) Explain how a person is introduced to values during the formative years [06]
- b) Why is Ethics of importance to an organization, highlighting the benefits to the organization, and the role played by the employer, employees and organizations culture [14]

[Total 20 marks]

Question 2

- a) Engineering Codes of Ethics states that "Engineers shall hold paramount the safety, health and welfare of the public and proper utilization of the funds and other resources in the performance of their professional duties". This may be displayed by
- o Maintaining engineering services,
 - o Observing engineering standards, and
 - o Being guided by their convictions.

Describe what is meant by these principles, and how the Code of Ethics can be violated by not complying with them. [12]

- b) Engineering Codes of Ethics states that "Engineers shall perform professional services only in the areas of their competence". Describe what is meant by this clause and how the Code of Ethics can be violated by not complying with its requirements [08]

[Total 20 marks]

Question 3

- a) A leading automobile manufacturer, was prosecuted by the US Environmental Agency in 2016, for falsifying emission test results to obtain acceptable results, while in reality the NOx emission was well in excess of permissible limits. In their Code of Conduct they claim that they,

"Take responsibility for continuous improvement of the environmental tolerability of our products and for the lowering of demands on natural resources while taking economic considerations into account. We therefore make ecologically efficient advanced technologies available throughout the world and implement them over the entire lifecycle of our products."

Explain how and why the Company broke their promises of safeguarding the environment [12]

- b) Comment on the Industry attitudes towards the Environment [08]

minimalist progressive

sub-minimal

[Total 20 marks]

Question 4

- a) The primary cause for major engineering disasters in the past, has been the violation of professional ethics, and the main violations can be considered as:

- i. Failure to safeguard life and property [08]
- ii. Corporate goals over-riding Ethical concerns [08]
- iii. Possible Corruption [04]

Considering the following disasters, and give examples of how ethical violations contributed to these major engineering calamities:

- The Uma Oya Multipurpose Development Project 550 mm U/D → 250 mm U/D
- Excellency Building collapse
- SS Titanic

[Total 20 marks]

Question 5

- a) The IESL Code of Ethics states that “Engineers shall build their reputation on merit, and not compete unfairly”

Describe what is meant by this Clause and how the Code of Ethics can be violated through the following unethical actions:

- i. Misrepresentation
- ii. Under-cutting
- iii. Bribery
- iv. Connections [12]

- b) The IESL Code of Ethics requires that “Engineers shall give evidence, express opinions or make statements in an objective and truthful manner”. Explain the need for following this, and the consequences of violating the Clause. [08]

[Total 20 marks]

End of question paper