



**GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY**

Faculty of Engineering  
Department of Civil Engineering

BSc Engineering Degree  
Semester 5 Examination – May/June 2018  
(Intake 33 – All Engineering Streams)  
**CE 3142 PROFESSIONAL ETHICS**

Time allowed: 3 hours

11 June 2018

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**INSTRUCTIONS TO CANDIDATES**

This paper contains 4 questions on 1 page  
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 (out of 100 for this paper) 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

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1. (a) Explain the following concepts: (i) Objectivity (ii) Transparency (iii) Integrity (iv) Conflict of Interest (v) Legality Vs. Morality [15 Marks]

(b) Give an example for each of the above concepts with relevance to Professional Ethics

[10 Marks]

(a)

*Objectivity- Taking decisions based on data, facts and evidence leaving aside personal feelings and personal interest.*

*Transparency- Making the decisions and the reasons for decisions open and available for any relevant person for perusal (except in the case of confidential information of a security and personal nature)*

*Integrity- Honesty, truthfulness and dependability and acting according to conscience.*

*Conflict of Interest- Situation where a decision making person has connections such as family relationships or business interest with another party that can be affected by the decision.*

*Legality- implies compliance with the Law and rules and regulations pertaining to a situation. Morality- implies behaviour based on what is right and wrong determined by one's obligations and need for fair play considering other human beings and the entire ecological system not forgetting obligations towards one self.*

(b)

*Examples:*

*Objectivity- An Engineer refuses to carry out a request made by the Minister-in-charge to build a dam at a particular site because the result of investigations and relevant data indicates that this is not a suitable location to site the dam although this site has political advantages.*

*Transparency- In the above example, the Engineer make all the relevant data and information available for any interested parties to peruse so that they can see the reasons for the stand taken by the Engineer and even invites constructive criticisms and suggestions.*

*Integrity- The site Engineer rejects a load of bricks supplied to the site as the quality is poor. The supplier offers a handsome bribe to the Engineer to make him accept this load. But he refuses to accept the bribe as he always acts according to*

*his conscience and never does any dishonest acts and warns the supplier to refrain from offering bribes to any persons.*

*Conflict of Interest- The Chairman of a Tender Board excuses himself from sitting in this Tender Board because one of the bidding persons is his nephew although he is quite confident that this relationship will not affect his decision.*

*Legality- According to a decision taken by the Cabinet, a Member of Parliament is entitled to a duty free vehicle for his personal use and he is free to do whatever he decides with such vehicle. Member A gets down a very expensive vehicle under this facility and then sells it making a substantial profit. Member B realizes that it is not morally correct to get a vehicle duty free and sell it to make money out of it although it is Legal. He gets down a cheaper vehicle and does not sell it to make money but uses it mainly for work connected with his duties.*

2. Describe a real or hypothetical project relevant to any field of Engineering and discuss in detail a minimum of four issues related to each of the following:

(a) Professional Ethics. [15 Marks]

(b) Ecological Conservation [10 Marks]

*Water Supply Project with pumped intake from a river and construction of filtration and treatment plants.*

*(a) Four issues related to Professional Ethics*

*Proper investigations have to be carried out before commencing the project.*

*Ensure that inconvenience to people of the area upstream and downstream are studied and minimized.*

*Trained and competent personnel are engaged to handle the Technical Aspects*

*Financial Resources are utilized properly and wastage is prevented.*

*(b) Four issues related to Ecological Conservation*

*Possible disturbance to river morphology is studied and minimized.*

*Possibility of sea water intrusion as a result of water extraction is studied and prevented.*

*The need to fell trees to make room for treatment works and pump houses is minimized.*

*Effect on fauna as a result of the project is studied and minimized.*

3. Assume that you are the Manager of a hypothetical or real factory, workshop or project site relevant to Engineering. Describe what this site is with regard to purpose of the project, activities, equipment, people and site features. Assume that you have been assigned by your superior to assess the safety situation at this site and come out with a status report and safety improvement plan. Describe how you would carry out this assignment.

[25 Marks]

*Multi-storey building site*

*Step one – Identify the hazards at the site; cranes and other heavy machinery; scaffoldings; false work; protective equipment worn by workers; health hazards due to dust; improper electrical wiring*

*Step two- arrange the hazards in the order of severity of damage to life and property if the hazard becomes a reality*

*Step Three- in respect of each hazard, allocate a number to reflect the probability of the hazard becoming a reality.*

*Step four based on steps two and three, identify the order in which action must be taken to address the hazards*

*Step five Prepare a plan to implement steps to minimize the possibility of hazards becoming reality. Indicate responsibilities to be assigned to people to implement the plan*

4. The following are some of the items related to Global and Business Ethics:

(a) Money Laundering (b) Skimp on Supply (c) Bio piracy

Take each of the above items and:

- (i) Explain the meaning of each item. [10 Marks]
- (ii) Describe the issues related to each item. [08 Marks]
- (iii) Describe a real or hypothetical example to illustrate each item. [06+01 Marks]

*(a) Money Laundering*

*Meaning: The practice of transferring illegally earned money into legal financial institutions such as Banks and Finance Companies often in*

*foreign countries after transferring the money abroad through illegal means.*

*Issues: This will promote illegal means of earning money such as through sale of narcotics, bribery and fraudulent accounting.*

*Example: A person makes vast amount of money by importing and selling narcotic drugs and transfers the money so earned into foreign bank accounts, after converting the money to foreign exchange through illegal means.*

*(b) Skimp on Supply*

*Meaning Artificially withholding the supply of goods to the market in order to increase the price when the demand increases due to shortage.*

*Issues This will provide opportunities to the supplier to make unreasonable profits through unreasonable price increase following the increased demand.*

*Example A group of large scale rice millers hoard the stocks of rice to release them when the demand increases and they can increase the price.*

*(c) Bio –piracy*

*Meaning Surreptitiously collecting and developing biological products like plants or animal parts and secretly export them or sell them locally to make profits.*

*Issues This will deplete valuable biological products and lead to ecological degradation and also amount to stealing of valuable biological products.*

*Example International trade in ivory obtained by killing elephants.*

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