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GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY
BACHELOR OF SCIENCE IN ENGINEERING DEGREE EXAMINATION - 2017

INTAKE 32 - SEMESTER 5
CE 3142 PROFESSIONAL ETHICS

Instructions:
ANSWER ALL QUESTIONS

Duration: 03 Hours

1. (a) Explain the similarities and differences between Moral Values, Ethical Values, Etiquette and Spiritual Values. [12 Marks]

Moral Values

അതദ്ദേഹം മറ്റെന്തെങ്കിലും പെരുമാറ്റപരമായ പാറ്റണുകൾ ഉണ്ടാക്കുന്നു. അവർക്ക് മറ്റെന്തെങ്കിലും നഷ്ടം സംഭവിക്കാൻ കഴിയും. Right to live free from harm from others.

Moral Values refer to behavioural norms arising from basics of what is right and what is wrong and are of a universal nature and are based on concepts of right to live, free from harm from others.

Ethical Values

expected behaviour in an organization or profession, (profession നോക്കുന്ന പെരുമാറ്റം) Upholding duties and responsibilities by virtue of being a member upholding dignity of organization.

Ethical Values refer to expected behaviour in an organization or profession such as the Engineering Profession upholding the duties and responsibilities by virtue of being a member of such organization and also upholding the dignity of the organization. **Ethical Values** cover moral values and extend moral values to issues relevant to the organization.

Etiquette refers to expected behaviour in social situations and has a cultural element as a result of which these may vary with time and location.

എന്തും മറ്റും നോക്കിയാൽ നല്ലതല്ല. മറ്റെന്തെങ്കിലും നഷ്ടം സംഭവിക്കാൻ കഴിയും. Cultural values

Spiritual Values are also universal in nature like moral values but these extend beyond moral values in not only not doing harm but doing what is good such as helping others. Spiritual values have variations arising from

religious and cultural beliefs. However, core spiritual values have moral values as the base.

(b) Indicate the necessity for Moral and Ethical Values. [05 Marks]

Moral values are necessary for the human society to live in peace and harmony.

Ethical values are necessary to fulfill the objectives of an organization in a responsible manner preserving the respect and dignity of the organization.

(c) Give one examples to illustrate each of the values indicated in (a) and the consequences of violation of the values you cite in your examples. [08 Marks]

Moral Values – To be truthful and honest with others.
Violation would be to be deceitful leading to loss to others and mislead others.

Ethical Values- To project responsibility in professional activities. Failure to do so will harm the image not only of the person concerned but of the entire organization.
Failure to uphold Ethical Values can also harm the clients and other members of the organization.

Etiquette – expected behaviour at a Banquet. Violation will bring about disrespect to the violator and make onlookers feel uneasy.

Spiritual Values- To love others and be kind to others.
The violation of this would mean hating others or not caring about others. Such behaviour could make the subject self-centred and selfish and can be harmful to others.

Nilkamal

2. (a) Describe the procedure that should be followed in assessing and minimizing risk to life and property and development of a Risk Management Plan. [15 Marks]

The first step is to identify the hazards at the particular place and arrange them in the order of seriousness for possibility of causing damage/injury to life and property.

Next step is to assess the likelihood (risk) of each of the hazards becoming a reality. In doing this, instruction manuals, past records and the condition of equipment must be looked at among other relevant factors. Considering the seriousness of each hazard and associated risk, a priority order must be prepared to handle each hazard to eliminate or minimize risk of hazards becoming realities. Based on this priority order, steps must be worked out and implemented through appropriate personnel and techniques to eliminate or minimize the risk.

(b) Illustrate your answer by taking an example of a site relevant to your field of Engineering. **[10 Marks]**

The answer must illustrate how the above procedure can be applied to a particular situation at a site relevant to the candidates field of Engineering.

3. (a) Clause 8 of the Code of Ethics of Institution of Engineers, Sri Lanka states, "Engineers shall be committed to the need for sustainable management of the planet's resources and seek to minimize adverse environmental impacts of their engineering works or applications of technology so as to protect both present and future generations."

Assuming you are called upon to plan a reservoir project (or any other similar engineering project relevant to your field of Engineering), (i) Describe the specific issues you would consider to implement the above clause and indicate how you would handle the issues you describe. **[10 Marks]**

The description must include steps to conserve the ecological balance considering soil, plants, animals, (fauna and flora) pollution of water, air & noise and appropriate strategies for waste management and hazards to health of human beings and animals particularly through release of toxic substances.

The planning stages of the project should include an Environmental Impact Assessment (EIA) by a qualified

team and appropriate strategies to address the issues that come up in EIA

(ii) State the possible challenges you may have to face in implementing the above clause and how these challenges may be dealt with. [06 Marks]

The challenges may be from politicians arising from their personal agendas, mis-informed public, financial constraints, equipment and man-power shortages, lack of expertise and delays due to adverse weather conditions and social upheavals.

Depending on the nature of the project cited, the relevance of the above factors must be considered and appropriate remedial steps must be explained.

(b) Explain the similarities and differences between (i) Anthropocentrism (ii) Biocentrism (iii) Ecocentrism. [09 Marks]

(i) Anthropocentrism refers to Environmental Ethics taking into consideration, the need to prevent harm to human beings only.

(ii) Biocentrism refers to Environmental Ethics taking into consideration, the need to prevent harm to all living beings only.

(iii) Ecocentrism refers to Environmental Ethics taking into consideration, the need to prevent harm to all living and non-living entities of the environment including earth, water, oceans, rocks etc.

Although consideration of Environmental Conservation in a particular situation may be considered separately, all three of the above must be considered as relevant to the particular situation.

4. (a) Explain with examples, the following terms relevant to Professional Ethics.

(i) Objectivity (ii) Integrity (iii) Conflict of Interest (iv) Continuous Professional Development (v) Deontological Ethics (vi) Normative Ethics (vii) Utilitarian Ethics.

[14 Marks]

- ① (i) **Objectivity** – Deciding on issues based on data, facts and reliable evidence leaving out personal preferences and need to satisfy others for personal reasons.

Example: Deciding on the location for an irrigation project to satisfy the political advantage of a powerful politician ignoring technical, environmental and social considerations.

- ② (ii) **Integrity** - The need to be honest and truthful in performing professional activities.

Example: In writing reports and giving evidence to be truthful.

- ③ (iii) **Conflict of Interest** – Getting involved in the decision making process where one or more persons to be affected by the decision are close relations or has other close connections with the person involved in decision making.

Example: A person sitting on the Tender Evaluation Board where one of the bidders is his son.

- ④ (iv) **Continuous Professional Development** – The need for professionals to continually update their Professional Knowledge.

Example by attending seminars, workshops, short courses etc.

- (v) (vi) & (vii) These refer to ethical principles based respectively on:

The morality of action and the consequent result ;
Adherence to rules and regulations irrespective of the
morality of action and the consequent results;
Considering the benefits of results of the action
irrespective of morality of the action and the
adherence to rules and regulations.

Examples are not necessary for these three items.

(b) Briefly describe the relevance of each of the above for the Profession of Engineering.

[11 Marks]

Each of the above items have to be taken into account
in performing activities in the Profession of
Engineering to ensure responsible performance of
professional activities while maintaining the respect
and dignity of the profession.

power point &
mage sahodaraya.

KDU Intake 33- Professional Ethics Module

Continuous Assessment Test (This will carry 20% of your final mark for the module. (70 % will be for the final semester examination)

This is a closed book individual test and cheating will result in zero marks.

In your answer paper, please write your Name; Field of Engineering and Number

Time allocated for this test is one hour.

Consider a real or imaginary project or activity related to your field of Engineering or any other field of Engineering.

Related to this project or activity, develop a narrative (story) with fictitious names to clearly bring out the concepts of (1) Trust Worthiness; (2) Objectivity; (3) Conflict of Interest; (4) Loyalty; (5) Environmental Stewardship; (6) Sustainability; (7) Legality.

Your narrative may demonstrate violation or fulfillment of the relevant concepts.

In your narrative you must underline the places where the above concepts are brought out and on the left hand margin, indicate at the relevant places, which of the above concepts is brought out in the underlined sections.

Your narrative may be in the form of an essay or series of statements but refer to one single project or activity.

As an introduction to your narrative, you must briefly describe the project or activity.

In the answer, the following issue related to the relevant concepts should have been brought out (not necessarily in any particular order).

- 1. Trust worthiness where honesty and dependability (honouring promises made) is fulfilled.**

(5)

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2. Objectivity where decisions are taken based on facts - data – reliable evidence and not merely on one's personal feelings and interest.
3. Conflict of interest where a person 'A' who is involved with decision making and evaluation carries out his tasks knowing that one or more of the parties who are affected by such decision or evaluation are in some way connected to 'A' even if 'A' is certain of not favouring the connected party.
In a situation where 'A' has to be involved in the decision making process, he must before hand make a declaration about the connection preferably in writing to the other members of the decision making process and other relevant persons.
4. Loyalty, where a person should not betray the good name of the party 'A' whom he serves and not take any action detrimental to the interests of 'A' except in a case where 'A' requests an unlawful or unethical action to be carried out in which case this must be explained to 'A' and the fact that he is morally compelled to take a stand according to his conscience which may dissatisfy 'A'.
5. Environmental Stewardship where Engineers are obliged to take whatever action possible to eliminate or at least minimize the damage to earth's natural resources and well being of human beings and all living beings in planning/carrying out projects.
6. Sustainability implies that when Engineers plan and carry out projects, they must ensure that the project can survive for the intended duration considering financial, maintenance, social, environmental and political aspects.

Stewardship

⑨ 7. legality implies the need to ensure compliance with laws of the land in planning and carrying out projects.

Note: The narrative may bring out compliance or violation of the relevant concepts indicating clearly whether it is a compliance or a violation.

Full marks will be given if a minimum of five of the above concepts are correctly brought out in the narrative.

Some Moral / Ethical Values

Honesty (uprightness & fairness), truthfulness, sincerity, frankness

concern for the well being of others

Respect the autonomy of others

Trustworthiness

Doing good for the others

Preventing harm to others

Impartiality (equal treatment)

Objectivity

Full disclosure (transparency)

Diligence (hard working and hard effort)

← Avoiding conflict of interest (used in a situation in which the concerns or aims of two different parties are incompatible)

Environmental Stewardship

Reverence for place.

Fairness

Respect the right of others

Respect for the laws of state

Respect for culture.

Principles Engineering Ethics

honesty

Integrity

equity

protecting public safety, health and welfare