**GE 105 Introduction to Engineering Design**

**Tutorial (8): Engineering Ethics**

**INSTRUCTOR: Dr. Raja Rizwan Hussain**

**Part A – SEE TUTORIAL SOLUTION SLIDES**

1.  Write three of the fundamental engineering ethics?

2.  Which of the following situations violates the engineering ethics (specify the relevant engineering ethics that are being violated):

-          An engineer works as a project management

-          An engineer hides a fatal error in his design

-          An engineer has registered a patent

-          An engineer refused to participate in a strike

3.    Give some examples to indicate how the engineer can give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.

4. Suppose you are working in the environmental division of a computer manufacturing firm. You learn that your company might be discharging unlawful amounts of lead and arsenic into the city sewer. The city processes the sludge into a fertilizer used by local farmers. To ensure safety, it imposes restrictive laws on the discharge of lead and arsenic. Preliminary investigations convince you that the company should implement stronger pollution controls, but your manager insists the cost of doing so is prohibitive and that technically the company is in compliance with the law. Discuss the ethical issue and state what you should do, giving reasons for your answer.

5. A County Engineer in Virginia demanded a 25% kickback in secret payments for highway work contracts he issued. In 1967 he made such an offer to Allan Kammerer, a 32 year old civil engineer who was vice president of a young and struggling consulting firm greatly in need of the work. Kammerer discussed the offer with others in the firm, who told him it was his decision to make. Finally Kammerer agreed to the deal, citing as a main reason his concern for getting sufficient work to retain his current employees.

Discuss the ethical issue of Kammerer's act, giving reasons for your answer.

**Part B – CLASS WORK**

Answer in the table below by true or false the following ethical statements and provide the NSPE section number attesting your choice.

1. Engineer, in the fulfillment of their professional duties, must carefully consider the safety, health, and welfare of the public.
2. Engineers shall not be required to engage in truthful acts when required to protect the public health, safety, and welfare.
3. Engineers shall not permit the use of their names or associates in business ventures with any person or firm that they believe is engage in fraudulent or dishonest enterprise, unless such enterprise or activity is deemed consistent with applicable state or federal law.
4. Engineers shall strive to be objective and truthful in professional reports, statements or testimony, with primary consideration for the best interest of the engineers’ client or employer. The engineers’ report shall include all relevant and pertinent information in such reports, statements, or testimony, which shall bear the date on which the engineers were retained by/for the clients to prepare the reports.
5. Engineers shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.
6. Engineers shall not solicit but may accept financial or other valuable consideration, directly or indirectly, from outside agents in connection with the work for which they are responsible.
7. Engineers shall acknowledge their errors after consulting with their employers or clients.