

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)

Department of Computer Science and Engineering (CSE)

MID SEMESTER EXAMINATION

SUMMER SEMESTER, 2018-2019

DURATION: 1 Hour 30 Minutes

FULL MARKS: 75

Hum 4441: Engineering Ethics

Programmable calculators are not allowed. Do not write anything on the question paper.

There are **4 (four)** questions. Answer any **3 (three)** of them.

Figures in the right margin indicate marks.

1. a) What is engineering ethics? Analyze the concept "Great power brings great responsibility". 7
b) What is trade secret? Explain obligation of confidentiality of an engineer with a generic case study where you used to work for Galactic motors and working now for Ford as an Auto design engineer. 5
c) Evaluate the concepts with a proper example that, "Some facts are ethical but illegal whereas some facts are unethical but legal." 5
d) Samuels worked as a programmer and Matthews worked as robot operator at cybernetics Inc. Matthews was crushed into death when the robot started his wave hand violently. Samuel was charged the cause of death of Matthews due to the malfunction of the robot where a particular piece of robot program written by Samuels responsible for this malfunction. What is the ethical misconduct occurred in this situation? Analyze your thoughts. 8
2. a) What is the definition of professionalism? State their characteristics. 10
b) Why do professional have special ethical responsibility? 5
c) Therac-25 machines was built by Canada Atomic Commission ltd. What was various responsibility for the accident occurred in 1985-87 by this machine? 10
3. a) What is conflict of interest? Why does a conflict of interest seem unethical? 7
b) What can you do to avoid a conflict of interest? 5
c) How will you maintain ethical behavior as a research students? 5
d) Imagine that you and your friend Kevin are in "examining engineer" job position for the last 10 years. You noticed that an increasing lack of interest from Kevin in his job and he is not taking sufficient care in the execution of his role of examining engineer, and that this breach of duty may be impacting the safety of rail bridges. You know that you and he both have a duty to ensure that work is conducted with care and competence, but you must decide firstly what such a duty requires in this case, and secondly whether any breach is the fault of your colleague or the system in which you are both working. On top of this, you must also contend with conflicts that might arise between your professional duties and your loyalty to your friend. What should you do? Discuss this case with appropriate summery. 8
4. a) What are statements of ethical principles? Explain their categories. 7
b) What is organizational behavior? Why organizational behavior matters. 5
c) What is the Skill Survival Kit? Can you consider Journaling as a developmental tool? Explain. 5
d) Bill is a software engineer who is asked to give an opinion in court as to the level of security offered by a company's data protection procedures. Bill suspects that the system may not be completely secure, though he has not had the opportunity to inspect it as thoroughly as he would like. Should Bill accept the request to appear as an expert witness? If so, how should he phrase his testimony? 8