

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

Department of Computer Science and Engineering (CSE)

SEMESTER FINAL EXAMINATION

SUMMER SEMESTER, 2017-2018

DURATION: 3 Hours

FULL MARKS: 150

Hum 4441: Engineering Ethics

Programmable calculators are not allowed. Do not write anything on the question paper.
 There are 8 (eight) questions. Question no. 8 is compulsory. Answer any 5 (five) from the remaining questions. Figures in the right margin indicate marks.

1. a) Define professionalism from sociological perspective. Mention its main characteristics. This definition has a number of disagreements. Briefly discuss them. 15
 b) *A social practice is inconceivable without this distinctive aim/objective.* Explain it with suitable examples. 10
2. a) Present definition of profession given by Micheal Davis. Explain its different components. 10
 b) Is engineering a profession? Justify it from 10
 i. Sociological perspective and
 ii. Socratic Account
 c) *Professional ethics dominates personal morality.* Justify the statement with an example. 5
3. a) What is common morality? *There is a distinction between an evaluation of a person's actions and an evaluation of his intention.* Briefly explain with a suitable example. 5
 b) What is standard of care? Discuss why it is needed whereas there is specific engineering standard. Explain the key components of the definition of "standard of care" given by J.B. Kardon. 15
 c) What is basic difference and similarity between common morality and personal morality? 5
4. a) *A complication occurs when the personal morality and professional ethics conflict.* Explain with suitable examples. Finally mention how Muslim professional should deal with such situation. 10
 b) Discuss the qualities of a good engineer. 5
 c) *Organization cannot be morally responsible.* There are two opposing concepts about this statement. Briefly explain them. 10
5. a) What are common impediments to responsible action? Briefly discuss them. How does a Muslim engineer fight these temptations? 10
 b) The cost-benefit approach is one of the three promising ways of utilitarian approach in addressing moral problems. Mention other two ways. The cost-benefit approach has a number of flaws. Explain them. 15
6. a) Cost-benefit analysis involves three steps. Explain them. Finally, mention their major limitations. 10
 b) *Engineering definition of technology may not be applicable for all fields of science.* Explain with a suitable example. 5
 c) Discuss the concepts of technological optimism and technological pessimism. Youtube is a technological platform mainly targeted for video sharing. Technology optimism and pessimism do not consider this platform in the same way. Your task is to criticize it from these two contexts. 10

- a) Define patent and copyright. Discuss the major differences between them. 10
- b) *Certain works are considered to be in the public domain, owned by the public, and they are not subject to copyright.* Cite three examples to support this position. 5
- c) What is fair use of material? *Some scientific invention has made it more difficult to enforce fair use of material.* Justify with example. 5
- d) What is reverse engineering? Briefly describe the difficulty of computer program protection in this regard. 5

[Compulsory]

- 8. a) Imagine you are the CEO of a software company. You need to hire a number of programmers for your company. What will be your selection criteria for this purpose? Mention them. 5
- b) Explain three performance parameters to measure job performance of an employee. 5
- c) Explain the weaknesses of:
 - i. Maslows Hierarchy of Needs
 - ii. Two-Factor Theory
- d) Explain Acquired-Needs Theory. What is Thematic Apperception Test (TAT)? Observe the following figure carefully. Your task is to write three different stories to assess the dominant needs (as derived from acquired-needs theory) typically used in TAT. 10



Figure 1: Picture for Question 8.(d)