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**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**Department of Computer Science and Engineering (CSE)**

**MID SEMESTER EXAMINATION**  
**DURATION: 1 HOUR 30 MINUTES**

**SUMMER SEMESTER, 2022-2023**  
**FULL MARKS: 75**

**Hum 4441: Engineering Ethics**

**Programmable calculators are not allowed. Do not write anything on the question paper.**  
 Answer all 3 (three) questions. Figures in the right margin indicate full marks of questions with corresponding COs and POs in parentheses.

1. Raymond Holt, a product manager at a tech startup B99, is responsible for overseeing the development of new features for the company's mobile app. During a recent update, Holt instructed one of his team members, Amy Santiago, to implement a feature that would collect data on users' browser history. The purpose of collecting this data was to personalize advertisements within the app, thereby potentially increasing user engagement and revenue for the company. However, Gina Linetti, a junior developer from another team, overheard this directive and chose to disclose the information by writing an exposé in a well-known tech magazine.
  - a) What are the professional responsibilities of Holt? 7  
(CO1)  
(PO1)
  - b) Classify the type of whistle-blowing Gina engaged in. 4  
(CO2)  
(PO1)
  - c) Evaluate the necessity of whistle-blowing for Gina with the four conditions required. 7  
(CO2)  
(PO2)
  - d) State what the startup could have done to prevent this situation in the first place. 7  
(CO2)  
(PO1)
2.
  - a) Rosa Diaz is a cyber security expert who started working in a high-pressure job. Mention the set of principles that are applicable for her. 10  
(CO1)  
(PO1)
  - b) Terry Jeffords is an engineer who has taken a new job with a competitor of his previous company. At a meeting he attended, a research engineer described her plans to develop a new product similar to Terry's former company. He knows that the direction this engineer is taking will be a dead-end and cost the company a lot of time and money. Suggest whether Terry should tell the engineer what he knows. Would your suggestion be different if the new company was not a direct competitor of the previous one? 8  
(CO2)  
(PO1)
  - c) How can utilitarianism or rights and duty ethics be applied to issues surrounding the proper conduct of research? 7  
(CO1)  
(PO1)

3. a) John had entered into a binding agreement with Global Semiconductors, where he was legally obligated not to disclose any trade secrets. This contractual obligation remained in effect indefinitely. However, after some time, John transitioned to a new company, Worldwide Intelligent Chips. In his new role, John discovered that some of the ideas he had conceived during his tenure at Global Semiconductors could be effectively utilized in his current projects at Worldwide Intelligent Chips. These concepts had not progressed to the stage of becoming industrial processes during John's time at Global Semiconductors. Note that Global Semiconductors and Worldwide Intelligent Chips are not direct competitors in the industry. Despite this lack of competition, John found himself facing a moral dilemma regarding whether to disclose the information he had gained at his previous company. After careful consideration, John ultimately made the decision to share the ideas with his new company while trying to downplay the connection to Global Semiconductors. He believed that by doing so, he could contribute positively to the ongoing projects and initiatives at Worldwide Intelligent Chips, ultimately benefiting his personal growth.

Analyze the situation using the **Line Drawing Technique** to find out if John's idea is ethical or not. Use the following cases to populate the line:

1. Only use former working experience to guide new development. Do it in the same direction, but in a different new way.
  2. Reveal secrets to Worldwide Intelligent Chips. The new products sell well without anyone noticing the illegal use of the ideas of Global Semiconductors.
  3. Reveal secrets to Worldwide Intelligent Chips. Inside the company, the proposal is turned down because the boss fears the potential copyright and litigation problems. Personal reputation is damaged.
  4. Not personally reveal the idea, but ask the boss to buy the idea from Global Semiconductors.
  5. Seeks legal advice to determine the permissibility of using the ideas at Worldwide Intelligent Chips.
  6. Decides to reach out to Global Semiconductors and requests permission to use the ideas.
  7. Proposes an open collaboration between Global Semiconductors and Worldwide Intelligent Chips, where both companies can share their expertise and ideas to develop innovative solutions together.
- b) Some facts are ethical but illegal, whereas some facts are unethical but legal - Justify the statement with an example.