ORDRE DES INGÉNIEURS DU QUÉBEC

MAY 2022 SESSION

Open-book examination
Calculators : only authorized models
Duration : 3 hours

14-EC-2 ENGINEERING IN SOCIETY, HEALTH AND SAFETY

Question 1 (20 marks)

i. What are the main themes you need to include in your lockout program? (6 marks)
ii. Lockout procedures and return to service procedures have several steps. What are those steps and their sequence? (6 marks)
iii. If lockout cannot be applied, how can one ensure that other methods provide an equivalent level of safety? (4 marks)
iv. Provide examples of such methods. (4 marks)

Question 2. (20 marks)

Indicate whether the following statements are TRUE or FALSE.

i. In all aspects of his work, the engineer must respect his obligations towards man and take into account the consequences of the performance of his work on the environment and on the life, health and property of every person.(4 marks)
ii. An engineer must inform his client as early as possible of any error that might cause the latter prejudice and which cannot be easily rectified, made by him in the carrying out of his mandate. (4 marks)
iii. Where an engineer is responsible for the technical quality of engineering work, and his opinion is ignored, the engineer must clearly indicate to his client the consequences which may result therefrom. (4 marks)
iv. Before ceasing to exercise his functions for the account of a client, the engineer must give advance notice of withdrawal within a reasonable time. (4 marks)
v. There are no guidelines to determine fees for the engineer. (4 marks)

Question 3 (20 marks)

i. How to define an enclosed area also known as confined space? Give three examples of confined spaces (4 marks)
ii. What are the risks associated with work in enclosed areas? (8 marks)
iii. How can one manage risks associated with work in enclosed areas? (8 marks)

Question 4 (20 marks)

i. What can be considered as just and reasonable grounds allowing an engineer to cease to act for the account of a client? (5 marks)

ii. What are the conditions allowing an engineer to be released from professional secrecy? (5 marks)

iii. What are the acts considered as derogatory to the dignity of the engineering profession? (5 marks)

iv. What are the conditions to meet when an engineer is doing his representation or advertising? (5 marks)