

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

E3 – ENVIRONMENTAL MANAGEMENT

October 2022

Note: This examination consists of 7 questions on 2 pages. Please read questions carefully before answering.

<u>Q. No</u>	<u>Time: 3 hours</u>	<u>Marks</u>	
		<u>Value</u>	<u>Earned</u>
1.	<p>A man has purchased a property zoned ‘light industrial’ on which he plans to set up a 3D-printing business inside an existing building. Prior to purchase the seller had commissioned a Phase 1 Environmental Assessment which stated that there was a low risk of soil or water contamination. Based on this information, the buyer completed the purchase and started to remodel the building. Later he found out that the report did not mention that many years ago there had been an industrial re-fueling site nearby. He also found out that some adjacent properties were recently discovered to be contaminated by hydrocarbons.</p> <p>a) What should the buyer do and why?</p> <p>b) Who is responsible for this cost? The seller? The buyer? The company that carried out the ESA? Government? All parties? Or nobody? Explain your choice.</p>	15	
2.	<p>What are riparian areas?</p> <p>How are they distinguished from non-riparian areas?</p> <p>In many parts of Canada, they are protected by Provincial and/or Local Government regulation. In your opinion, is this protection justified?</p>	15	
3.	<p>Carbon Capture and Storage (CCS) is an industrial practice where CO₂ is extracted from the air (or emissions) and stored underground where it is unlikely to escape back into the atmosphere. Although it sounds like a promising way to reduce GHGs, it has become quite controversial recently. What are the advantages and disadvantages? Will this become a solution to climate change?</p>	15	
4.	<p>A Concentrated Animal Feed Operation (for cattle) has been proposed in a watershed from which the many residents downstream obtain drinking water from wells. What are the potential environmental impacts and how could they be minimized?</p>	15	
5.	<p>Explain the following Federal Acts and how they may influence local developments:</p> <p>a) Species at Risk Act</p> <p>b) Fisheries Act</p> <p>c) The Canadian Environmental Assessment Act</p>	15	

6.	Algal blooms had become a major problem – especially around the Great Lakes – in the 1970s and 1980s. The problem diminished with the introduction of regulations that restricted the amount of Phosphorus (P) in detergents (which Canadian scientists had demonstrated were the main factor contributing to these blooms). However, recently algal blooms have again become a problem, despite the near absence of P in detergents. Explain. What can be done to minimize this problem?	15	
7.	One of Canada’s biggest ecological disasters was the collapse of the cod fishing industry in Atlantic Canada. This occurred in the 1980s. Populations of Northern Cod had decreased to 1% of historic levels by 1992. Explain why the collapse occurred and why recovery has been so very slow.	10	
Total Marks:		100	