

**CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS**

**E3 – ENVIRONMENTAL MANAGEMENT**

**June 2020**

**Note: This examination consists of six questions on two pages.**

**Marks**

Time: 3 hours

<u>Q. No</u>	<u>Question</u>	<u>Value</u>	<u>Earned</u>													
1.	<p><i>This question has three parts. Please answer each one.</i></p> <p>The Species at Risk Act recognizes five different categories.</p> <p>1. Match the terms from the first column (<b>Status</b>) with those in the second column (<b>Description</b>).</p> <p>2. Rank each according to the severity of the threat (extinct being the worst).</p> <p>3. What are the most common reasons for terrestrial species being at risk; name at least three. Which one is the most important?</p>	20														
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2.	<p>Undeveloped forested land typically allows between 75 and 95% of rainfall and snowmelt to infiltrate into the soil. The corresponding figures for urban downtown areas are 10 to 30%, and for residential areas between 25 and 75%.</p> <p>a) Why are the infiltration rates for urban downtown areas so low?</p> <p>b) Why is there such a wide range for residential areas?</p> <p>c) What are the impacts of low infiltration rates on stormflow infrastructure?</p> <p>d) What measures can City planners and engineers take to minimize these impacts on downstream water resources?</p>	20														

3.	<p>A company plans to develop a 24-ha parcel within an area that is partly forest and partly wetland, but with no surface flow in or out of the area. The parcel lies within a larger area that is widely considered by the local community to be valuable for wildlife habitat and biodiversity. In addition, both local and provincial government agencies want to ensure that these values are protected. Although the developer wants to maximize the number of housing units, the owners understand that they will have to make concessions in order to obtain permits.</p> <p>a) How would this development impact wildlife habitat?</p> <p>b) The developer must submit a plan to allow some development while protecting some habitat. What would be the main elements in this plan?</p>	20	
4.	<p>Each province has its own Acts and Regulations governing the management of contaminated sites. All require an Environmental Assessment procedure that is similar to that originally described by CHMC (Canada Mortgage and Housing Commission). That procedure involves three phases.</p> <p>a) <b>Briefly</b> describe these phases, and their purpose.</p> <p>b) Imagine if you purchased land after assurances from the seller that no contamination exists. Then you learn from an old study that the site is contaminated with heavy metals. What are your options?</p>	20	
5.	Explain how greenhouse gases affect the global climate.	10	
6.	In general terms, will climate change affect food production in Canada? Explain your answer.	10	
	<b>Total Marks:</b>	100	