

**CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS**

**E-3 ENVIRONMENTAL MANAGEMENT**

**October 2012**

**Note: This examination consists of 5 questions on 1 page.**

**Marks**

**Q. No**

**Time: 3 hours**

**Value   Earned**

1.	<p>A 15,000 head of cattle feedlot will be established in gently rolling countryside in the Canadian prairies. About 300 m downhill is a small stream that flows into a shallow lake in a Provincial Park. The lake is believed to represent ‘pristine aquatic habitat’.</p> <p>a) What environmental impacts may arise from the operation of the feedlot? b) How may these be mitigated?</p>	20	
2.	<p>A landowner lives in an agricultural area near a mid-sized Canadian city. Part of his land is subject to high water tables, such that he is unable to farm it in a productive way. He wishes to bring in ‘clean fill’ from a construction site in order to raise the ground level of his land. The local government and neighboring residents are concerned about some of the environmental effects that may result from the operation.</p> <p>a) What effects would likely be of concern to people living in the area? b) How should the local government regulate this operation?</p>	20	
3.	<p>Define the following:</p> <p>a) Carbon sequestration b) Turbidity c) Red-listed species d) Riparian area e) Critical habitat f) Contaminant plume g) Confined aquifer h) Eutrophication i) Biodiversity j) Ephemeral stream</p>	20	
4.	<p>A land developer is considering acquiring a parcel of land in a suburban area. The adjacent land has been zoned ‘Industrial’ for over 50 years and, while no industrial activity is now apparent, the land has been cleared of vegetation at some time in the past.</p> <p>a) What should the developer do prior to making an offer on the land? b) What risks will he be exposed to if he does none of these?</p>	20	
5.	<p>An industrial site (consisting of large buildings and parking lots) is planned for an undeveloped parcel of land near an airport in a growing Canadian city. The City has a by-law that restricts the amount of surface runoff from the developed site to a maximum of 30% of any storm precipitation.</p> <p>a) Suggest various ways that the developers can meet this requirement. b) Why might a large open detention pond be undesirable in these circumstances?</p>	20	
<b>Total Marks:</b>		100	