

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

E3 - ENVIRONMENTAL MANAGEMENT

March 2014

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

Marks

Q.No

Time: 3 hours

Value Earned

1.	A major pipeline carrying heavy crude oil (bitumen) is proposed for a mountainous area of northern British Columbia. Discuss the four most important (in your opinion) types of environmental impacts that the proponents will have to address. Consider the likelihood of occurrence as well as the consequences.	20	
2.	Preserving certain ecosystems can come at the cost of lost development opportunities. But these can be balanced by “ecosystem services” which may have values greater than the opportunity cost. Imagine a wetland in the middle of a 40 ha parcel that a developer wishes to subdivide for residential housing. What values might accrue from a preserved wetland? Discuss four such benefits and explain why they may be important.	20	
3.	A well-organized mountain biking group is lobbying a local government to grant special status for their favourite biking area. There is an unplanned network of trails in the area that they have been using for years. There are streams and gullies flowing through the area, and they drain ultimately into a larger stream that has high recreational use – especially for fishing. Another group in the valley wants to set aside the area as a park to protect wildlife. If you are the government official charged with reviewing this issue, what are the main environmental issues that will arise from this potential conflict? What kind of environmental information would you assemble to assist you in your review?	20	
4.	In order to obtain carbon credits, a European company has purchased a tract of non-forested land in Canada for the purpose of afforestation. a) How will this have a positive effect on greenhouse gas concentrations? b) What factors will influence the success of this operation?	20	
5.	Under a new “Brownfield Development” strategy a small Canadian city proposes to redevelop a 20 ha industrial complex within the urban boundary. The city wishes to develop this as a commercial centre. Completed environmental studies have shown the site to contain areas contaminated with hydrocarbons. Discuss, in broad terms, the options available to a would-be developer.	20	
	Total Marks:	100	