

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

**SCHEDULE II / ITEM 4
LAND USE PLANNING AND ENVIRONMENTAL MANAGEMENT**

March 2010

Note: The use of calculators or similar devices is not permitted in this exam.

Note: This examination consists of 10 questions on 2 pages.

Marks

Q. No

Time: 3 hours

Value Earned

1.	You are requested by a developer to explain in writing the procedures and planning steps the developer should follow in the development of a 75 ha parcel of land for residential purposes. Outline your response in point form.	15	
2.	In many regions in Canada, lifestyle and financial factors are contributing to the transformation of summer recreational properties into permanent residences. List in point form some of the problems resulting from this practice and suggest some steps that municipal or regional jurisdictions can take to mitigate them.	10	
3.	It has often been said that every crisis is an opportunity for change. Natural disasters such as the January 2010 earthquake in Haiti have an everlasting effect on the lives of those affected by the devastation. Authorities, to the extent that they are still capable of functioning, have responsibility for responding to the emergency, short-term and long-term needs of the population. List some of the short-term considerations and actions that land use and environmental planners will have to take in order to address the long-term recovery for the affected areas.	8	
4.	You are the Land Use Coordinator for a regional municipality which has an ongoing requirement for both pit run and crushed gravel for the construction and maintenance of roads for rural residential subdivisions. Granular materials are in scarce supply in the region, but test drilling has identified a source of acceptable material in a rural area that will meet the projected needs for the next 15 years. The 15 hectare site encloses a long and narrow esker that generally parallels a rural arterial road and that has its nearest side approximately 300 metres south of the centre line of the arterial road. The prevailing wind in the area is from the south 80% of the time. The nearest land use occupation, a residence, is 700 metres east of the closest boundary of the proposed pit excavation. Early rumors circulating about the possibility of a pit has other area residents mounting a NIMBY opposition to the proposed development. Describe the mitigative actions you would propose to the regional government in order to minimize negative impacts before, during and after the proposed operations.	6	

5.	<p>Give a concise definition of each of the following terms as they apply to site planning and/or environmental management:</p> <p>a) sustainable yield</p> <p>b) detached housing</p> <p>c) leaching</p> <p>d) pH</p> <p>e) biomass</p> <p>f) food chain</p> <p>g) floor area ratio</p> <p>h) wetland</p>	2	
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6.	The issue of climate change and its causes and effects do not enjoy universal consensus from environmental scientists. Identify in point form some of the challenges, opportunities and threats that you can foresee from climate change as a practicing land surveyor in Canada.	7	
7.	List the stages for a typical site planning cycle in which the designer is properly involved.	12	
8.	What are some techniques available for spring runoff erosion control in the ditches of a gravel-surfaced mining haul road?	6	
9.	Prepare a checklist for site data that will be required as part of a comprehensive site analysis.	10	
10.	<p>You have been asked to consider site design alternatives for the development of six adjoining rectangular residential lots in a municipality on an existing public road with buried service mains. Each single-family dwelling will have a footprint of approximately 130 square metres. Draw a sketch of the lots, including typical dimensions and building setbacks, that you would propose for:</p> <p>a) a conventional subdivision</p> <p>b) a zero lot line subdivision</p>	5	
		5	
Total:		100	