

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

**SCHEDULE II / ITEM 4
LAND USE PLANNING**

March 2009

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

Marks

Q.No

Time: 3 hours

Value Earned

1	List in point form six of the points which should be considered before and during project abandonment and reclamation.	12	
2	At what point in time should a winter road be closed, usually designated in Land Use Permits?	6	
3	Explain the loudness, or energy level, of a sound measured in decibels.	8	
4	Give the generally accepted values for each of the following: a. maximum gradient of drainage swales and ditches, in percent. b. width of a normal sidewalk, in feet. c. maximum length of a cul-de-sac in a residential area, in feet. d. normal maximum longitudinal gradient of a paved road, in percent. e. normal dimensions for a parking stall, in feet. f. minimum outside radius of a cul-de-sac, in feet.	2 2 2 2 2 2	
5	Explain with the use of a neatly drawn sketch the concept of "zero lot line" housing and list two advantages and two disadvantages of its use.	10	
6	List the three fundamental requirements imposed by fee simple residential ownership as mentioned by Kevin Lynch and Gary Hack in their textbook <u>Site Planning</u> .	9	
7	Garbage collection and disposal presents an ever-increasing challenge as communities grow and rural infill occurs between them. What are some of the considerations in selecting a landfill site which will provide capacity for long-term community growth?	10	
8	Explain the following terms as they relate to land development: a. official community plan b. zoning bylaw c. restrictive covenant d. net density, as applied to housing units e. utilidor f. noise abatement g. traffic calming	2 2 2 2 2 2 2	

9	<p>As a Canada Lands Surveyor in private practice in Whitehorse, Yukon, you have been appointed to a multi-disciplinary team of experts assembled to consider local energy benefits from the impending construction of the Alaska Highway Natural Gas Pipeline. The major issue to be examined is whether the Government of Yukon should negotiate a purchase of natural gas for domestic, commercial and industrial distribution and consumption through a new regulated utility, or purchase natural gas to fuel a high-efficiency turbine to generate electricity which will be added to existing grid capacity to supplement existing hydro generation and diesel peaking and backup generation. The electrical rates are also regulated by a public utilities board. The major residential and commercial areas of Whitehorse are serviced with water and sewer mains buried at an average 3 metre depth to avoid winter freezing. Gas distribution mains and lateral service connections would likely be buried at a 1.5 metre depth. Subsurface gravels prevail over the municipality with little or no bedrock encountered in serviced areas or areas planned for future expansion. Permafrost is not present. Approximately 95% of the existing electrical customers are serviced with overhead power, telephone and cable TV lines.</p> <p>At the initial meeting of the team, each member is asked to come to the next meeting with a list of factors to be considered for each alternative so a consensus can be developed on a workplan to conduct benefit/cost analyses of the two alternatives. Members are invited to "think outside" their own boxes to ensure that all factors are included in the discussion.</p> <p>Develop your list of factors for the two alternatives which you will then present at the meeting.</p>	11	
10	<p>A new multi-lane highway will have a signaled grade intersection with an existing arterial road. The intersection angle of the two long tangents on each road is approximately 30°. Sight distance on both alignments is not an issue.</p> <p>Indicate by a neat sketch a proposed design to minimize intersection conflicts together with any control devices which might be utilized to optimize traffic flows.</p>	8	
Total Marks:		100	