

**CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS**

**E3 – ENVIRONMENTAL MANAGEMENT**

**March 2018**

**Note: This examination consists of 7 questions on 1 page.**

**Marks**

**Q.No**

Time: 3 hours

Value   Earned

1.	Name four different reasons that the riparian areas of streams and lakes should be protected from development. Justify your answers.	15	
2.	With increasing land development in previously undeveloped watersheds, researchers have found that floods tend to become more frequent and/or more severe. Explain why this occurs.	10	
3.	In relation to Question 2, suggest some general measures that land use planners could use to reduce this impact on water quantity.	10	
4.	The land use in area on the outskirts of a major Canadian city is primarily agricultural. It contains numerous dairy farms as well as feedlots for beef cattle. The area relies on groundwater via a network of wells to produce domestic water supply. Recently, technicians testing the water have recorded worsening quality and in a few cases have not met Canadian Drinking Water Standards. a) What do you think may be the cause of this deterioration? b) What general measures could be implemented to mitigate this trend?	5 15	
5.	The Federal Government plans to develop a road to a remote community in Northern Canada. It will pass through otherwise undeveloped boreal forest. What do you think would be the impact on: a) Migrating wildlife? b) Resident wildlife?	15	
6.	A 5 acre parcel is being developed for townhouses. The land slopes by 5% for 50 m down to a meandering stream that flows for 1 km to a larger fish-bearing river. The developer has obtained all the necessary permits and is ready to start construction. The local government has approved the layout but will be watching this construction closely, responding to concerns by local residents. a) What are the main environmental concerns during construction? b) What specific steps must the developer take to minimize these impacts?	5 10	
7.	The majority of climate scientists believe in anthropogenic climate change. What is the primary link between human activity and increased global temperatures? Explain how the link works using scientific principles.	15	
<b>Total Marks:</b>		100	