CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

C-5 GEOSPATIAL INFORMATION SYSTEMS   October 2012

Note: This examination consists of 10 questions on 1 page.

		Marks	
Q. No	Time: 3 hours	Value	Earned
1.	Define GIS and discuss how GIS is different from other classes of information systems.	10	
2.	Describe the four types of map projections by the preserved property.	8	
	Explain the importance of map projection.	4	
3.	Name the three types of simple features used in GIS and their geometric properties. Describe how each type of these features is represented in GIS.	10	
4.	What is a relational database? List two advantages of using the relational database model in GIS.	8	
5.	Explain the difference between "attribute-based" queries and "location-based" queries.	8	
6.	Describe the two common types of data (or models) and their advantages for terrain mapping and analysis.	12	
7.	Given two digital maps of a city: one shows landmarks, and the other shows restaurants. One of the attributes of the restaurants layer lists the type of food (e.g., Canadian, Chinese, Japanese, etc.). Suppose you want to find a Chinese restaurant within 1000 meters of Landmark A. Describe the steps that you will follow to complete the task, with a diagram showing your process (circle for data input and output, rectangle for operations, directed line for connections).	10	
8.	Explain the five main data quality indicators as included in most GIS data quality standards.	10	
9.	There are four types of issues in implementing GIS: data issues; people issues; issues pertaining to technology; and application issues. Briefly explain any **two** types of these issues.	10	
10.	How do you think the web map services provided by the mainstream IT firms such as Google and Yahoo will affect the GIS development?	10	
	Total Marks:	100	