

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

C5 – GEOSPATIAL INFORMATION SYSTEMS

October 2011

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

Marks

Q. No

Time: 3 hours

Value Earned

<u>Q. No</u>		<u>Value</u>	<u>Earned</u>
1.	Define the following terms (each worth 2 marks): Address Matching, De Facto Standard, Feature Code, Overlay Operation, Rubber Sheeting	10	
2.	Explain, with examples, how the real world is represented based on a feature model (i.e., point, line and area) in GIS.	10	
3.	Discuss the difference between attribute-based and location-based (spatial) queries in a particular piece of GIS software.	10	
4.	Explain the importance of map projections for users of GIS.	8	
5.	The relational data model has been the most popular data model for DBMS for many years. Explain, with examples, the relational data model. Also show how a relational database can be used to store the spatial and non-spatial data for a land parcel.	12	
6.	Discuss the current trend of storing minimum topological relationship in a GIS database and computing them on the fly when required.	10	
7.	List and briefly explain the main data quality indicators as included in most spatial data quality standards.	10	
8.	Compare thin-client and thick-client strategies in designing a web mapping application.	10	
9.	What are the human issues, other than the computer issues, which we need to consider in operating a GIS?	10	
10.	List the benefits and potential risks/challenges of implementing a GIS within your organization.	10	
	Total Marks:	100	