

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

C5 - GEOSPATIAL INFORMATION SYSTEMS

October 2014

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

Marks

Q. No

Time: 3 hours

Value Earned

1.	What four functions must all GIS include? Briefly describe each.	10	
2.	Explain the difference between attribute and spatial data. Give examples.	8	
3.	Explain why layers are a fundamental means of organizing geographic data in almost all GIS. Give and briefly describe 3 example layers in a vector-based GIS.	4 6	
4.	What are the advantages of raster-based overlay operations over their vector-based counterparts? What are the disadvantages?	5 5	
5.	Use a diagram and explain the line-in-polygon operation. Clearly describe the input and output of the operation.	10	
6.	What are the advantages of storing digital terrain in TIN rather than in DEM?	10	
7.	Explain the following terms with special reference to geographic data: de facto standard and de jure standard. Give example standard(s) of each.	10	
8.	What is metadata? Why is the metadata important to GIS?	10	
9.	According to Lo, C.P. and A.K.W., Yeung (2007) in Chapter 12 of Concepts and Techniques in Geographic Information Systems, what is the most critical people issue in implementing GIS? What causes this issue?	6 4	
10.	List and describe three issues (or problems) that are most critical to the overall success or failure of a GIS project.	12	
	Total Marks:	100	