

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

C5 - GEOSPATIAL INFORMATION SYSTEMS

October 2013

Note: This examination consists of 9 questions on 1page.

Marks

<u>Q. No</u>	<u>Time: 3 hours</u>	<u>Value</u>	<u>Earned</u>
1	There are many textbook definitions of GIS. Can you provide a working definition that one can use to test if a certain piece of software is a GIS or just some kind of mapping, drafting, image processing, or database management software? Explain why the definition works for such a purpose.	12	
2	Discuss the current trend of storing minimum topological relationship in a GIS database and computing them on the fly when required.	10	
3	Compare the use of raster and vector formats for representing geographic data in terms of data storage, data retrieval, and data analysis.	12	
4	The relational data model has been the most popular data model for DBMS. 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.	15	
5	Briefly describe the contents of a metadata standard, and explain why it is difficult to obtain data required for such a standard.	10	
6	With simple diagrams, explain the three basic elements of topological relationships in geographic data representation.	6	
7	What methods will you use to "sell" the benefits of GIS within your organization to gain the support from the management and end users?	10	
8	What are the human issues, other than the data and technology issues, that we need to consider in operating a GIS?	10	
9	Define the following terms: a) Feature identifier; b) Uncertainty; c) Helper program; d) Entity-relationship diagram (E/R diagram); e) System development life cycle.	3 3 3 3 3	
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