

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS

C5 – GEOSPATIAL INFORMATION SYSTEMS

October 2023

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.	List and briefly describe five major GIS functions.	10	
2.	How is spatial resolution defined in raster and vector data?	10	
3.	Discuss the advantages of vector GIS data compared to raster data.	10	
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.	12	
5.	What are the problems we face when integrating GIS data from different sources?	10	
6.	Describe in detail the four commonly-used methods for collecting terrain data.	8	
7.	You are asked to prepare a map that shows land parcels in a city that meet the following two criteria: (1) within 400 meters of streams, and (2) located in a conservation priority area. You are given two digital maps for the study area: one showing streams and the other showing the priority areas. Describe the procedure that you will use to complete the task. Draw a flowchart to show the procedure.	10	
8.	What is metadata for a GIS database, and how can metadata help us share data?	10	
9.	Describe three key issues in implementing GIS and explain why you think they are important.	10	
10.	What are the human issues, other than the computer issues, that we need to consider in operating a GIS?	10	
	Total Marks:	100	