

CANADIAN BOARD OF EXAMINERS FOR PROFESSIONAL SURVEYORS**C5 – GEOSPATIAL INFORMATION SYSTEMS****March 2026****Note: This examination consists of 10 questions on 1 page.****Marks****Q. No****Time: 3 hours****Value Earned**

1.	Define the following terms: (2 marks each) 1) Geocoding 2) Edge matching 3) Feature identifier (FID) 4) Rubber sheeting 5) UTM (Universal Transverse Mercator)	10	
2.	Describe how point features, line features and area features are represented in vector and raster formats. Compare the use of raster and vector formats for representing geographic data in terms of data storage, data retrieval, and data analysis.	6 9	
3.	Explain the concept of “layer” in a geographic/land information system. Why do we organize data in layers in GIS? Show a list of layers and their attributes that would likely be included in a GIS database.	10	
4.	You have schools (points) and neighbourhoods (polygons). Explain how you would assign each school to a neighbourhood, and describe the output from your assigning operation.	8	
5.	What’s the difference between defining a CRS and projecting/reprojecting a dataset?	10	
6.	Define raster resolution, extent, and NoData. Then describe a workflow to create a raster map of areas with slope > 15° using a DEM.	10	
7.	Design and describe a workflow to find “residential buildings more than 100 m from major roads” using buildings (polygons), roads (lines with road class), and zoning (polygons).	10	
8.	What are the advantages and disadvantages of storing digital terrain in TIN rather in DEM?	10	
9.	Briefly describe the contents of a metadata standard, and explain why is it difficult to obtain data required for such a standard.	10	
10.	What are the major issues pertaining to people in GIS implementation?	7	
	Total Marks:	100	