



PROFESSIONAL WRITTEN (GIM) EXAMINATION
Friday, November 25th, 2011
9:00AM – 1:00 PM

TIME ALLOWED:	Four (4) hours
# OF QUESTIONS:	Nine (9)
TOTAL MARKS:	100
PASS:	65%

INSTRUCTIONS

Note: This is a closed book examination. No aids are allowed.

1. There are nine (9) questions. Please ensure that you have a complete copy of the examination.
2. Note the number of marks for each question before compiling your answers and allocate your time accordingly.
3. Place your exam registration number at the top right-hand corner of **each page** of your answers and on the front of each booklet. **DO NOT** write your name on or in the book(s).
4. Each answer must begin on a new page, however questions may be answered in any order.
5. Reference each response to its question number, including subsection.
6. Write only on the right hand side of the examination book. You may wish to use the left (unruled) side for calculations, etc., however anything written on the unruled side will not be considered during marking.
7. Do not write in pencil.
8. This examination must be returned to the invigilator with your answer book(s).

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Question 1

(8 marks)

Describe your understanding of the designation GIM (Geographic Information Management/Manager)?

Question 2

(8 marks)

When requesting data from outside sources for inclusion in your geospatial database, what critical elements do you need to specify to enable you to manipulate and accurately upload the sent data into your data sets.

Question 3

(8 marks)

Define Spatial Data Analysis.

Question 4

(15 marks)

Your firm has been awarded a contract for a large GIS. Prior to the commencement of the field data collection phase, a health and safety meeting must be held.

- 1) Prepare an agenda for this meeting (3 marks)
- 2) Who will attend? (2 marks)
- 3) List five site specific hazards, and how will they be addressed. (10 marks)

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Question 5

(15 marks)

A potential client contacts you, as an OLS, requesting a proposal for GIM services for a remote location in Northern Ontario.

Prepare a typical business letter to the client confirming his request.

As this letter will form the sole business agreement, be sure to address all matters pertinent to a good business contract.

NOTE: Marks will be only given for business/contract issues, so be brief in describing the actual survey work. Do not do a cost estimate, just insert a dollar figure.

Do not sign the letter.

Question 6

(16 marks)

Describe the characteristics and properties of the NAD27, NAD83(adopted), NAD83(CSRS) and WGS84 datums. (4 marks each)

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Question 7

(18 marks)

A Geographic Information System is generally composed of Spatial Data and Attribute Data that are geo-referenced or mapped to a common referencing system.

Spatial Data:

- a) What are the 3 basic types of Spatial Data models? (3 marks)
- b) What are the advantages/disadvantages of the two primary models and provide examples of the types of information that are best suited for each? (4 marks)
- c) What are topological models and the associated advantages/disadvantages for analyzing data? (2 marks)

Attribute Data:

- a) Describe 3 types of attribute data models. (6 marks)

Mapping:

- a) What are the primary differences between the NAD27 and NAD83 datums? (2 marks)
- b) What is the difference in length of a 1000 meter horizontal ground distance at sea level along the central meridian on a UTM projection? (1 mark)

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Question 8

(6 marks)

According to the recently (December 15, 2009) amended *Surveyors Act*:

- a) Who may apply for a Certificate of Authorization? (2 marks)
- b) Describe two options that the Complaints Committee has in issuing a decision. (2 marks)
- c) What are the requirements for publication of a decision of a Discipline Panel? (2 marks)

Question 9

(6 marks)

You represent a Municipal organization that has ownership and copyright of current topographic mapping and have been approached by several major utility companies interested in having access to this data.

Prepare an outline for a data sharing agreement.