



PROFESSIONAL WRITTEN (GIM) EXAMINATION
Friday, November 30th, 2012
9:00A.M. – 1:00 P.M.

TIME ALLOWED:	Four (4) hours
# OF QUESTIONS:	Ten (10)
TOTAL MARKS:	100
PASS:	65%

INSTRUCTIONS

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

1. There are ten (10) questions. Please ensure that you have a complete copy of the examination, including the plan.
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

(15 marks)

A potential client contacts you, as an OLS, requesting a proposal for professional services from your firm.

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 services you would provide. Do not provide a dollar figure, just insert (\$) if applicable.

Do not sign the letter.

Question 2

(8 marks)

Your firm has been awarded a contract to prepare a cadastral/topographic survey of a large dam and associated hydroelectric generating station. Prior to the commencement of field work, a health and safety meeting must be held.

- a) Prepare an agenda for this meeting (3 marks)
- b) Who will attend (2 marks)
- c) List three site specific hazards, and how will they be addressed. (3 marks)

Question 3

(8 marks)

You are a newly commissioned OLS working for a private firm. Your supervisor, who is also an OLS, has requested that you cut corners in order to increase company profitability. You have serious concerns that his/her request is unethical & unprofessional and will lead to substandard results.

- a) How would you deal with the situation? (2 marks)
- b) Would your response differ if you discovered this practice at a local competitors' office? If so, how? (2 marks)
- c) If the Association of Ontario Land Surveyors became involved, what processes are available? (4 marks)

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Question 4

(4 marks)

As a Certificate of Registration member and an owner of a non-cadastral business:

- a) What are the minimum insurance requirements? (2 marks)
- b) What would you recommend for insurance (types, term)? (2 marks)

Question 5

(10 marks)

As a Certificate of Registration member (GIM), write a letter to a client responding to a request to include a cadastral survey as part of a multi-faceted survey project that you are conducting.

Do not sign the letter.

Question 6

(17 marks)

- a) What is the principal object of the Association of Ontario Land Surveyors? (5 marks)
- b) Identify six (6) provisions of the *Surveyors Act* and Regulations thereunder which are in place to ensure that the principal object is carried out. (6 marks)

Briefly explain each. (6 marks)

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)

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Question 7 (continued)

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)

Question 8

(9 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 a point form outline for a data sharing agreement.

Question 9

(6 marks)

The recently revised Performance Standards for the Practice of Professional Land Surveying (Regulation 216/10) now includes a section (Part VI) on Geographic Information Management. Describe three of the elements from that section that must be included in the project design and implementation of a GIM project. (2 marks each)

Question 10

(5 marks)

Discuss the differences in transforming between:

- (i) NAD27 and NAD83(adopted); and,
- (ii) NAD83(CSRS) and WGS84