

**The Universities Co-ordinating Council
Board of Examiners in Land Surveying**

The Surveying Profession
(Closed Book Exam)

Marks

April 1995

Time: 3 Hours

- 1) The December 1994 issue of ALS News contains two articles dealing with the issue of title insurance. As well, the ALSA Council has recently reactivated the Title Insurance Subcommittee.
- 4 a) What is title insurance and how does it work?
- 2 b) Is title insurance presently used in Alberta?
- 2 c) Why is title insurance an issue with the Alberta Land Surveyors' Association?
- 2 d) Is there a statutory requirement for Real Property Reports within the Province of Alberta?
- 2) A recent article in the Councillor's Forum section of ALS News estimated that 20% to 25% Alberta Survey firms are currently using GPS technology. In view of the importance of this technology, please answer the following:
- 5 a) Briefly describe what GPS is and how it operates.
- 2 b) Describe single point positioning.
- 2 c) Describe differential GPS.
- 2 d) What mathematical surface are heights referred to when using GPS techniques and what are these heights called?
- 4 e) Briefly describe what an active control system is and how it works.
- 4 3) Recommendation 1, to be voted on at the 1995 AGM, comprises changes to the Association Bylaws. Part of the bylaw changes include the formation of new membership categories including a category for an *'Associate Member'*. Who would be eligible for registration as an Associate Member.
- 2 4) a) What is the CCLS?
- 2 b) Who makes up its membership?
- 3 c) What is its function?

- 5) On June 1, 1994 the Geodetic Survey Branch, Land Information Division, Alberta Environmental Protection began the practice of publishing ASCM ID cards referred to the NAD83 datum.
- 4 a) What defines a datum and particularly the NAD83 datum?
- 4 b) What are the differences between the NAD27 and NAD83 datums?
- 4 c) Describe the procedure for converting mapping plane coordinates based on the NAD27 datum to mapping plane coordinates based on the NAD83 datum. When answering this question, assume that the National Transformation software package does not exist.
- 6) One of the articles of the Alberta Land Surveyors' Code of Ethics is:
Professional Impropriety
An Alberta Land Surveyor shall avoid even the appearance of professional impropriety.
- 6 a) Please discuss this particular article.
- 4 b) Please name four other articles of the Alberta Land Surveyors' Code of Ethics.
- 7) A recent publication of Geomatica included the following technical publications:
- 'Optimization of Integrated Survey Schemes for Deformation Monitoring'*
- 'Spatial Rendering and Visualization in Geomatics for Environmental and Related Applications'*
- 'The Role of Laplace Azimuth for Scale Error Control in an Existing Primary Control Network'*
- 5 a) Based on the definitions for the 'practice of land surveying' and the 'practice of surveying' contained in the Alberta Land Surveyors Act, should the topics covered by these technical papers be important to Alberta Land Surveyors? Please discuss.
- 8 b) Please define the practice of "land surveying" and the practice of "surveying" as it pertains to the Alberta Land Surveyors' Association.
- 6 c) The ALSA Professional Development Committee has recently completed a survey dealing with the issue of Mandatory Continuing Education. Please discuss this concept including the advantages and/or disadvantages of implementing a mandatory continuing education program for the ALSA.

8) You are an Alberta Land Surveyor engaged in private practice. You give a client a price for completing a survey. Upon completion of the project and after having delivered the final product to the client, a project invoice is generated. Unfortunately, you discover that the invoice totals twice the amount of which you had advised your client the project would cost. You believe the cost overruns were due to circumstances beyond your control, i.e. poor weather, flat tire, GPS satellite failures, etc.

5 a) What do you do?

6 b) Please discuss possible procedures that could be put in place to minimize or eliminate these situations?

2 9) a) Who is the current president of the Alberta Land Surveyors' Association?

2 b) Who is the Surveyor General of Canada Lands?

2 c) Are the member so the ALSA Council all registered Alberta Land Surveyors? If not, what additional person or persons sit on Council?

2 d) What purpose does the ALSA Manual of Good Practice serve?

4 e) Why do Alberta Land Surveyors require Professional Liability Insurance?

100