

THE EDUCATION COMMITTEE

By J. E. Jackson, O.L.S.

During the last world war and for some time after, there was a real shortage of Surveyors in Ontario. So much so that considerable pressure was brought to bear on the O. L. S. Association by members of Parliament and others in various parts of Ontario to permit City and Town Engineers and indeed any Professional Engineer to make surveys. To meet this challenge the Association appointed the Education Committee whose duty was to encourage students to take up surveying and provide for their training.

The first Committee was appointed in 1944, with W. L. Cassells of Ottawa as its Chairman. This committee recommended the setting up of a course of instruction for students with members of the Association well experienced in particular lines of survey work to do the lecturing. Arrangements were made with Ryerson Institute of Technology in Toronto for accommodation. A lecture course of six days was planned for students taking the Intermediate examination with lectures in Curves, Mensuration and Spherical Trigonometry. A four week course was planned for students taking the Final Examination in all of the subjects.

There were 65 who took the first Intermediate course and between 45 and 50 who took the Final course. Ryerson was able to accommodate us for about three years when it became necessary to seek accommodation elsewhere. One year we had a room at the "Amps" Club on Wellesley Street. Another year we got the use of a room in the basement of the Engineering Building at the University of Toronto. For the last several years, the lectures have been given in the Legion Building, 22 College Street, Toronto.

The attendance has kept up remarkably well being from 40 to 60 in each class. The smallest class so far was for the Intermediate course this year with an attendance of 17 with 47 in the Final Course.

A number of changes have been made in the personnel of the lecturers owing to death in some instances and in others, to the fact that the lecturer felt that he could no longer spare the time required.

Those who have passed on are as follows:-

E. G. MacKay, Geo. McCubbin, Norman MacRostie, and Tracey LeMay.

The course has proved quite successful providing the students with real help in preparing for the examinations. It has also provided more uniform source of information in the various subjects. Precis have been prepared in nearly all of the subjects for the Final Examination and in Curves, Trigonometry and Mensuration for the Intermediate examination. These precis provide excellent text books in summarized form. The thought behind these is that if the classes are too small to warrant providing a lecture course, the student, with the help of the precis, will be able to prepare for the exam with very little outside help.

Many changes have been made since the courses started.

Trigonometry which was all on one examination paper has now been divided, there being one paper for "Plane Trigonometry" and one for "Spherical Trigonometry".

Similarly Geometry has been made

"Plane Geometry" and the other "Analytical Geometry".

Mensuration has been divided into two papers one dealing more with Latitudes and Departures, missing courses and distances, etc., and the other dealing with problems involving irregular areas, etc.

Astronomy has been made more practical with the addition of the requirement that four sets of observations on the Sun and four sets on Polaris must be taken and handed in as a project before the written examination. This, not only has the effect of getting the student familiar with the process of taking observations but also has a decided effect on the results of the written examination.

Town Planning has now been divided into two separate papers, one dealing more with the legal aspect and the other more with the practical aspect.

Drainage Engineering and Photogrammetry are new subjects that have been added.

Also Forest Trees and more emphasis on Field Notes.

Curves has been moved from the Final to the Intermediate and is now a much more comprehensive study than formerly being more of a real test.

In fact the whole examination has been getting increasingly more difficult.

Some may think there are too many failures but if there were not some failures the conclusion would be that the exams were too easy. The aim is that when a student passes the exam, he really knows the subject.

The standard of qualification for undertaking the course and being apprenticed has been raised to that required by

universities for students entering on an engineering course.

Another important change is increasing the length of apprenticeship from 1 to 2 years for a graduate engineer and from 3 to 4 years for a non graduate.

The Final examination has been divided into two parts. Part I taking in most of the pure mathematical subjects while Part II has more to do with the various statutes or acts governing surveying, town planning, etc., along with descriptions. The effect of this is two fold. It enables the student to concentrate on 8 subjects instead of 16 and spreads the period of study over two years instead of one and it is more thorough.

Practically all of the above changes have been the result of recommendations to the Board of Examiners or Council or both, from the Education Committee who are responsible for the conduct of the lecture courses, standards to be attained, etc.

We have been most fortunate in our lecturers for these courses, two of whom are Professors from the University and the others are exceptionally experienced in the work of the particular subject to be taught. The students have been well taught and the courses are quite thorough.

For the courses this year, lectures were given for 5 full weeks of 6 days each, 6 hours per day, a total of 180 hours of instruction.

The Educational Committee has been and is looking toward bringing the standard of education of the Ontario Land Surveyor more nearly up to that of similar organizations throughout the world which means that we have to be continually raising our sights.

John E. Jackson