

Land and mine surveying : First class—L. Andrew 82 per cent., J. Crawford 71 per cent. ; third class—L. Kitching 44 per cent. Mathematics, junior : Third class—O. Wright 54 per cent. Mathematics, senior : First class—L. Andrew 78 per cent. ; third class—Y. Booker 49 per cent. Mechanical drawing : First class—L. Andrew 75 per cent. ; third class—O. Wright 52 per cent. Electricity, junior : Second class—O. Wright 62 per cent. ; third class—J. C. Sherley 54 per cent. Electricity, senior : Second class—T. N. Henry 58 per cent. Seventy per cent. and over constitutes a first-class pass ; 55 to 70, a second-class ; and 40 to 55, a third-class.

In all, forty-six passes were obtained by the students and of these twenty-three are first-class passes.

L. Andrew gained the University Scholarship, open for competition throughout the North Island. Although last year an alteration was made in the scholarship regulations, requiring a minimum of 65 per cent. in certain subjects instead of 75 per cent., L. Andrew did not need this concession to enable him to win his scholarship, for he obtained 75 per cent. or over in each of the nine subjects. He scored the highly creditable total of 709 marks out of a possible 900, being an average of 79 per cent. L. Kitching was second in total marks, securing 645 in ten subjects, or 64·5 per cent. He thus wins the President's medal for the maximum number of marks gained in senior subjects, because L. Andrew, having previously won this medal, is ineligible.

In surveying, the prize donated by Mr. E. F. Adams was gained by Mr. J. Crawford with 71 per cent. L. Andrew scored 82 per cent. in surveying, but the conditions attached to the prize debar him from taking it.

T. N. Henry won the electricity prize donated by Mr. H. D. M. Haszard.

In the Saturday science class, J. Paul secured top marks with 76 per cent., and thus wins the prize for that class. He also holds the Corinthian Lodge Masonic Scholarship.

The syllabus has been amended and is here given in detail. It comes into force at the beginning of 1906.

SYLLABUS OF CLASSES.

Mining Engineering.

Mining.—Characteristics, mode of occurrence, and distribution of the usual minerals ; classes of ore-deposits ; faults ; recovery of lost lodes ; shaft-sinking and driving levels ; dry and wet ground ; timbering shafts, levels, and inclines ; underground workings.

Mine-drainage.—Surface water ; dams ; force-pumps ; lift-pumps ; steam-pumps ; pumping-engines ; capacity of pumps ; thickness of pipes.

Explosives.—Composition and strength ; mode of charging boreholes and firing ; products of combustion ; calculation of quantities.

Ventilation.—The atmosphere ; natural ventilation ; artificial ventilation ; furnaces ; fans, &c. ; division of air-currents ; composition and detection of noxious gases.

Hauling and Winding.—Strength of ropes ; aerial haulage ; underground haulage ; roads, rails, and guides ; safety appliances ; turbine, Pelton wheel ; steam-engine ; winding-engine and signalling.

Text-book.—Mining, Lufton.

Land and Mine Surveying.

Land-surveying.—Chains and tapes ; ranging-lines ; use of theodolite, level, prismatic compass, surveyor's compass, and Abney level ; chaining ; offsets ; reduction of slope-measurements ; inaccessible points and obstacles to alignment ; triangulation ; measuring base-line ; tie-lines.

Mine-surveying.—Underground traversing ; connecting the underground with the surface meridian.

Levelling.—Recording levels ; grading roads, tramways, and water-races.

Office-work.—Computation of co-ordinates, areas, and triangles, including closing lines ; use of logarithmic tables ; scales ; methods of plotting survey ; construction of survey plans ; principle and use of slide rule.

Text-book.—Land-surveying, Baker and Dixon, or similar book.

Metallurgy of Gold and Silver.

Ore Crushing and Pulverising Machinery.—Rock-breakers ; stamps ; rolls ; commonly used ball and roller mills ; arrangement of battery ; sampling ; dry and wet crushing.

Furnaces.—Drying and roasting furnaces.

Concentration.—Classifiers and concentrators.

Amalgamation.—On copper plates and in pans ; “cyanide,” “chlorination,” and “hyposulphite” processes.

Treatment of Slimes.—Agitation ; filter-presses.

Smelting of Bullion, Zinc, Slime, &c.—Fluxes ; slags ; cupellation ; refining bullion ; retorting and smelting of bullion.

Calculation of results obtained in battery.

Text-books.—Handbook of Gold-milling, Louis ; Cyanide Process, Park.

Practical Assaying (Dry).

Dry Assaying.—The furnaces and assay appliances ; the fuels and fluxes ; methods of sampling ; preparation of the ore-sample ; fusion and cupellation ; parting ; weighing and valuation of the bullion ; sources of error in fire assaying ; assay of litharge and red-lead ; assay of gold and silver ores ; assay of bullion ; assay of lead-ores ; assay of tin-ore ; retorting and melting of bullion ; preparation of