

places were won by our boys. Moreover our total list of undergraduates is much the largest for the colony.

THOUGH the larger part of the money for encouraging Higher Education goes to the Outports this year, our pupils will notice that several smaller sums are open to them for competition. Moreover, every one who wins the first or second place in any grade, receives a prize. Of course the chief reward is the fact of being first or second; but it is gratifying, to young people especially, to have some tangible reward added to the honour.

AND now a last word on the coming examinations. Do your best. Keep up your courage to the end in spite of papers which frighten you. Above all *be honest*. Succeed by your own work,—or fail.

WE thank Mr. Pitts very much for our enlarged X-ray apparatus. We now have a 6-inch Ruhmkorff instead of a 4-inch, and also some exceedingly fine Geissler tubes. These additional expensive tubes are intended to illustrate the most recent theories concerning these wonderful phenomena.

After the exams. are over we intend giving an evening or two to the experiments with our new apparatus for the benefit of our older boys and girls.

A PAPER IN HYDROSTATICS.

1. IN a Bramah Press the diameters of the pump and press plungers are as;—1 : 20 and the lever which depresses the pump plunger is 4 feet long, the plunger being 6 inches from the hinge. What is the mechanical advantage of the machine (*a*) without the lever (*b*) with it. If by this machine a bale of cotton is compressed from a thickness of 6ft. to 1ft., how far must the end of the pump plunger travel? and how many strokes must be made if the length of one stroke is 10 inches?

2. A safety-valve is to be devised to open when the