

## Examination Papers.

### UNIVERSITY OF TORONTO.

ANNUAL EXAMINATIONS, 1886.

#### Junior Matriculation.

#### ARTS AND MEDICINE.

#### LATIN—PASS AND HONOURS.

Examiner—J. E. HODGINS, M.A.

N.B.—Candidates in Medicine and pass candidates in Arts will take I. and II. Honour candidates in Arts will take II. and III.

#### GRAMMAR AND PROSE COMPOSITION.

##### I.

1. (a) Decline in the singular only: *idem tempus*, *meus filius*, *sapientior senex*, *quivis*, *quaestor locuples*.

(b) Give the genitive singular and the gender of: *nutus*, *nemo*, *munus*, *magistratus*, *locus*.

2. Give other degrees of comparison of: *senior*, *mature*, *faciliter*, *ardens*, *audacius*.

3. Write the 2nd sing. of the indicative present and future, and of the subjunctive present and imperfect of: *nolo*, *edo*, *eo*, *fit*, *possum*.

4. Write a list of propositions that govern either the accusative or the ablative, and state the difference in meaning according to the case.

5 (a) When is *quis* used for *aliquis*? (b) Mention three post-positive words.

6. Distinguish the meaning of:

(a) *consulo te*, *consulo tibi*, *consulo in te*.

(b) *caveo te*, *caveo tibi*.

(c) *tempero equis*, *tempero equos*.

(d) *vir integri corporis*, *vir integro corpore*.

(e) *gratias habere*, *gratias agere*, *gratiam referre*.

7. Write notes explanatory of the construction of the italicized portions of:

(a) *Gloria, divitiæ, honores interta ac caduca sunt.*

(b) *Sperandæ igitur sunt divitiæ et honores.*

(c) *Volsæ civitatem quam habebant optimam, perdidērunt.*

(d) *Montis periculo defuncti sanus.*

(e) *Ingeniū hoc magnū est.*

##### II.

Translate into Latin:

1. I believe him to have been the first within human memory to perpetrate such a monstrous crime, and I hope he will be the last to venture on anything of the kind.

2. It is said that she told many falsehoods in order to make herself seem younger than she really was.

3. Where, said he, did you come from, and whither and when do you intend to start hence?

4. It was, he used to say, the special peculiarity of Kings to envy men who have done them the best service.

5. He replied that nearly the whole army had been annihilated, and that it made no difference whether it had been overwhelmed by famine, pestilence or the enemy.

6. Then again, taking advantage of the change of tide, he endeavoured to reach that part of the island which was best for landing, as he had discovered during the previous summer. And in this

matter the pluck of the soldiers was especially praiseworthy, since, though in transports and heavy ships, they by continuous rowing kept pace with the ships of war, which were lighter and consequently better adapted for rapid motion.

##### III.

Translate:

We call gods and men to witness that we have not taken up arms against our father-land, nor to injure any individual, but in order to protect our persons from violence, (we) who in our misery and poverty have been deprived, most of us of our country, all of us of fame and fortune. It has not been permitted any of us to appeal to (uti) law, nor, since we have lost our estates, to enjoy personal liberty; so great has been the severity of the usurers and of the praetor. Oftentimes your ancestors in pity of the Roman plebs, by their decrees relieved want; and quite recently, within our recollection, debts due in silver were paid in brass (and that too) with the approval of all good men. Oftentimes the plebs themselves incited by either the desire of power or by the hauteur of the magistrates, have taken up arms and seceded from the patricians. We, however, seek not power, but liberty, which no good man will bear to lose save with his life.

#### PHYSICS.

Examiners—J. M. CLARK, M.A.; T. G. CAMPBELL, B.A.

1. Define *velocity*, *mass*, *force*, *energy*, and *work*.

2. State Newton's three Laws of motion. Give a practical illustration of the application of each of these laws.

3. Shew that a force can be accurately represented by a straight line.

4. Enunciate the principle of the Parallelogram of Forces.

Two forces *S* and *10* act at an angle of  $60^\circ$ . Find the magnitude of their resultant.

5. What are the conditions that a number of given forces acting in one plane on different points of a body may produce equilibrium.

6. Define pressure at a point and shew what is meant by saying it is the same in all directions.

A closed vessel, full of liquid with its upper surface horizontal, has a weak spot in this surface not capable of bearing a pressure of more than *S* lbs. to the square foot. If a piston be fitted into an aperture in the upper surface whose area is 4 square inches, what pressure upon it will burst the vessel?

7. Shew that the pressure at any point of a liquid at rest varies as the depth below the surface.

A cistern, shaped like an equilateral triangle, of which each side is eight feet, is filled with water to the depth of two feet, find the pressure on the base and sides of the cistern.

8. To what extent is a body immersed in a fluid pressed upwards? How may this be shewn by experiment?

Two bodies of weights 5 and 6 lbs., and specific gravities 7.7 and 11.14 joined together weigh 9 lbs. when immersed in a certain liquid; find the specific gravity of the liquid.

9. Describe the construction and use of a barometer, and state the advantages and disadvantages of the mercury barometer.

If the tube of a barometer be 36 inches long, and on account of air being in the upper part the instrument stands at 24 inches when a correct instrument stands at 29.6, compare the density of the air in the imperfect barometer with that of the air surrounding it.

10. An elastic body of specific gravity .6 is compressed to

$$\frac{20 + x}{20 + 4x}$$

of its natural size by immersion to the depth of *x* ft. in water. If its weight be 12 lbs., at what depth will a force of three lbs. keep it at rest?

#### ARTS.

#### LATIN AND GREEK GRAMMAR.

#### HONOURS.

Examiner—GEO. H. ROBINSON, M.A.

1. Decline in combination *πολύ κρέας*, *ferrens jejur*.

2. Give stem and dative plural of *ἵππευς*, *γίγας*, *ὄωμια*; *νίξ*, *κίσις*, *ροίσις*.

3. Compare *σοφός*, *γερατός*. *μάλα*; *bene*, *super*. *facilis*.

4. What auxiliary verbs are found in Greek and Latin? Give examples.

5. Greek and Latin for *Six*, *18*, *28*, *800*.

6. Give the principal parts of *πλέω*, *ἀφίημι*, *φέρω*, *φίημι*, *ἰνέομαι*; *ausero*, *vello*, *adipiscor*, *tollo*, *caedo*.

7. Explain the forms: *pridie*, *mercede*, *mi*, *rexere*, *a. d. vi. kal. sext.*: *χάρην*, *ἀνώγειω*, *θρίξτι*, *εἰπών*, *ἠνεχομην*.

8. Translate into English, with syntactical notes:

(a) *ὄπως μοι μὴ ἐρεῖς ὅτι ἔδωκε τὰ δῶδεκα δῖς ἔξ.*

(β) *πολλάκις τῆς ἡμέρας.*

(γ) *διγῆν γάρ, εἰ χρη τῶνδε θήδουαι πέρι.*

(δ) *οὐχ οἶός τε εἰμι μὴ οὐ λέγειν.*

(a) *Capita conjugationis caesi sunt.*

(b) *Cui bene fuit?*

(c) *Quo plures erant, eo major fuit caedes.*

(d) *Νοῦ ἰτα τε αἰνολοῦτο me punitate.*

9. Translate into Greek:

(a) You should cultivate (*ἀδελείω*) virtue.

(β) He conquered the barbarians in the battle of Marathon.

(γ) Persons were not allowed to go into the General when he was not at leisure (*ὀχολάζω*).

(δ) If any one should do this, he would do me a great service (*ὠφελέω*).

10. Translate into Latin:

(a) He is the same man that ever he was.

(b) With my usual prudence I said nothing.

(c) We have read this in Virgil.

(d) He praised the soldiers, and dismissed them.

A MUSICAL journal of Leipzig states that Liszt's posthumous pianoforte method, to which all pianists have been so eagerly looking forward, is not complete in the manuscript.