University of Toronto.

ANNUAL EXAMINATIONS: 1875.

PRIMARY.

MEDICINE.

CHEMISTRY.

Examiner: W. OLIVER, B.A.

1. Describe the gas nitrogen, giving its combining number and mode of preparation.

2. Five volumes of air, and five of hydrogen, are exploded in an eudiometer: what volume of each will remain after the explosion?

3. Explain and illustrate by example the law of multiple proportions.

4. On breathing into a glass of lime water, a white substance is formed. Explain by formula the changes that take place, and characterize briefly the elements of which the precipitate is composed.

5. Give the formula for nitric acid, olefiant gas, hydrochloric acid, ammonia, phosphoric acid, iodide of potassium, carbonic sulphide, chloride of sodium, arsenic, and peroxide of iron.

6. Explain fully what is meant by the terms *acids*, *bases*, and *salts*.

7. Give tests for determining the presence of iron, zinc, manganese, and copper.

8. Compare the action of chlorine and sulphurous acid as bleaching agents.

9. Name and give the formula for the compounds of arsenic and oxygen, with the mode of obtaining them.

10. Distinguish between the ferrous and ferric salts. How would you obtain $Fe_2 3 SO_4$ from $Fe_2 O_3$?