The original of this examination paper is in the University Archive. It was discovered under the floorboards of the Croft Chapter House (one of the very earliest chemistry laboratories, located in University College) when it was refurbished as a meeting room in the 1960s.

# University of Toronto

## ANNUAL EXAMINATIONS 1858

### THIRD YEAR.

### APPLIED CHEMISTRY.
### HONORS AND SCHOLARSHIPS.

Examiners {HENRY CROFT, D.C.L.
{MICHAEL BARRETT, M.A., M.D.

1. What is the action of hard water upon soap, and how may this be prevented ?

2. Describe the ordinary method of filtration.

3. In what form is carbon best adapted for decolourizing, and how may this property be stored when diminished by the absorption of colouring matter; as in the purification of sugar ?

*4. What gases are evolved during the destructive distillation of coal, and which of them are useful as illuminating agents; and which are injurious and require removal ?

*5. Describe the general process of purification, and the method of separating the ammonia.

6. How are sal-ammoniac and carbonate of ammonia prepared, and from what sources ?

7. What technically useful substances are obtained from the tar as produced by the distillation of coal ?

8. Describe the manufacture of wax candles.

9. Describe the manufacture of stearine candles.

10. Mention the principal fats used in the manufacture of soaps and candles, and their sources.

*11. By what means are they purified ?

*12. Compare the composition of potatoes, wheat, peas and rice, as regards their nutritious power.

13. Explain the fermentation of bread.

*14. Explain the action of mordants in dyeing.

*15. Give an account of the different ways in which colours can be communicated to textile fabrics.

---

***Honor Questions**