

PROGRAMME N° 3.

CHEMISTRY.

I.

1. Definition of the science of chemistry ;—matter and the divers states in which it exists.
2. Cohesion ;—affinity ;—difference of these two properties.
3. Crystallization of bodies ;—different processes of crystallization.
4. Difference between adhesion and chemical attraction, and modifying causes.
5. Elementary bodies ; their number ;—metalloids and metals ;—principal substances of this class.
6. Principle of the nomenclature ;—acids, bases, salts and neutral salts.
7. Equivalents ; examples.

II.

8. Oxygen ; its preparation and its properties.
9. Combustion ; examples of slow and quick combustion.
10. Azote ; its preparation and its properties.
11. Air ; its composition and its properties.
12. Hydrogen ; its preparation and its properties.
13. Water ; analysis and synthesis.

III.

14. Carbon ; diamond ; plumbago ; coal ; lignites and peat.
15. Preparation of charcoal, bone-black and lamp-black.
16. Properties of carbon ;—its discoloring and disinfecting power.
17. Preparation of oxide of carbon and carbonic acid, and their properties.

IV.

18. Formation of carbonic acid by animals ; its decomposition by plants.
19. Preparation of carbonetted hydrogen ; its properties.
20. Preparation and purification of gas used for illumination.
21. Flame, and its cause.

V.

22. Nitrous acid ; its properties.
23. Ammonia ; its properties and its use.