

complete how much gas is left? (c) What experiment will show the nature of the gas left?

4. (a) Give the usual method of preparing Sulphuric acid, showing by equations the reactions that take place. (b) What are the properties and uses of this acid, and what is the usual test for it?

5. What volume of Oxygen when combined with Hydrogen (under standard conditions) will produce 10 grams of water?

6. How does chemical affinity differ from cohesion?

7. Write the names and symbols of four compounds containing Sulphur.

8. (a) Who discovered Oxygen? (b) Who showed its true importance and overthrew the phlogistic theory?

PHYSICS.

PROFESSOR COLEMAN, PH.D. (Victoria), EXAMINER.

1. What is meant by specific gravity? How can you determine the specific gravity of a piece of gold? Why does iron float on quicksilver?

2. Two rods, one of iron, the other of stoneware, have one end thrust into the fire; what effect is produced respectively on the hands holding them, and why this difference?

3. Describe and sketch a mercurial thermometer. What are its uses and what property of bodies with respect to heat does it illustrate?

4. What is heat and how can it be transmitted?

5. How does light differ from heat?

6. Show by a sketch the effect of a convex lens on rays of light. Does a lens magnify as much in water as in air? Give reason for your answer.

7. Is gravitation a force that can be compared with heat or light?

8. Define "solid," "liquid," "gas."

9. In what ways may a gas be changed to a liquid and a liquid to a solid?