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COMPARISON  
OF THE  
EXAMINATION QUESTIONS  
ON  
CHEMISTRY AND PHYSICS,

GIVEN BY DR. McLELLAN, EXAMINER OF PUBLIC SCHOOL TEACHERS,  
WITH THE  
QUESTIONS GIVEN TO NORMAL SCHOOL STUDENTS BY MR. KIRKLAND A  
FEW WEEKS BEFORE THE TIME OF EXAMINATION, IN 1874.

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CHEMISTRY.

*Dr. McLellan's Examination Paper.*  
*June, 1874.*

QUES. 1.—What is ozone? How is it prepared, and what are the physical and chemical differences between it and oxygen?

QUES. 3.—How would you obtain evidence of the presence of ammonia, whether pure or combined, in a given solution?

QUES. 4.—We inhale air and throw off carbonic acid from our lungs: How would you show experimentally that the amount of carbonic acid in a given volume of air which comes from our lungs is far greater than the quantity of carbonic acid which is found in an equal volume of air which we inhale?

*Mr. Kirkland's Questions.*  
*June, 1874.*

2. What is ozone? How is it obtained, and what are its properties?

5. How is ammonia obtained? Give derivation of name, and express the reaction by an equation. What are its properties? How would you detect the presence of ammonia, (1) pure, (2) in combination with some other substance.

6. How would you detect the presence of a carbonate? What takes place when carbonic acid is passed into lime water to saturation? If a vessel contained a mixture of nitrogen and carbonic acid, how would you proceed to measure the nitrogen and how to weigh the quantity of carbonic acid? If you wanted to determine the volume of carbonic acid, how would you do it?