

# AN ROINN OIDEACHAIS

(Department of Education).

## BRAINNSE AN MHEADHON-OIDEACHAIS

(Secondary Education Branch).

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INTERMEDIATE CERTIFICATE EXAMINATION, 1939.

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FULL COURSE

### SCIENCE (Syllabus B).

FRIDAY, 16th JUNE.—AFTERNOON, 4 TO 6 P.M.

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[Not more than *six* questions to be attempted. All the questions are of equal value. Illustrate your answers wherever possible.]

1. How would you show that approximately one-fifth of the volume of air is concerned with combustion ?

2. Draw and describe a thermometer for measuring maximum and minimum temperatures. Explain how the instrument would behave during (a) a rise, (b) a fall, of temperature.

3. Explain, with examples, the ways in which heat is transferred. Give instances of the use of good and bad conductors.

4. Describe, with sketch, an experiment which shows that hydrogen combines with oxygen to form water.

5. Breath differs from air in being warm, damp and stuffy instead of cool, dry and fresh.

Explain how these changes are respectively caused.

6. Explain the terms "acid," "alkaline."

If you were given some calcium and some carbon how would you proceed to obtain a specimen of calcium carbonate ?

7. What experiment would you perform to show that the plumule and radicle are the essential parts of a seed ? What are the functions of the other parts of the seed ?

8. Describe, with the aid of sketches, five methods by which plants are propagated vegetatively.

9. Of what importance is light in carbon assimilation? Describe an experiment that would justify your answer.

10. What part does saliva play in digestion? What is the effect of extreme heat on digestive juices? Describe experiments in support of your answers.

11. Write a note on the function of blood. Why must blood be continually moving in the body?

12. Describe, with sketches, three different types of joint in the human skeleton.