

AN ROINN OIDEACHAIS
(Department of Education).

BRAINNSE AN MHEADHON-OIDEACHAIS
(Secondary Education Branch).

INTERMEDIATE CERTIFICATE EXAMINATION, 1939.

LOWER COURSE.

SCIENCE (Syllabus B).

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

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

1. What do you understand by the term Relative Density? A relative density bottle weighs 30.00 gm. When full of water it weighs 55.00 gm.; and when full of turpentine it weighs 51.25 gm. Find the relative density of turpentine.

2. Describe, with sketch, an experiment that you have seen which shows that some solids expand on being heated. Mention two instances where this knowledge has proved useful.

3. Describe, with sketch, an experiment you have seen which shows that air contains a gas in which a burning substance will not continue to burn.

4. Explain the following facts:

- (i) When water is suddenly heated in a flask, the level of water first drops.
- (ii) On a cold evening, moisture is deposited on the windows in a warm room.
- (iii) A piece of copper becomes hotter than the same weight of water if they are heated for the same length of time by the same source of heat.

5. Distinguish between a mechanical mixture and a compound. How would you separate the parts from a mixture of salt and iron filings?

6. Describe, with sketch, the preparation and properties of hydrogen. How does this gas differ from carbon dioxide?

7. Describe an experiment you have seen performed, which showed that a living plant transpires.

8. What are the different parts of a flower? What is the function of each part?

9. What differences are there between plants growing in light, and those growing in shade? Give reasons for your answer.

10. Name six articles of food which contain a great deal of starch. Why are these foods usually cooked before they are eaten? What changes does starch undergo in the human body?

11. Write a note on respiration in animals. Describe, as far as you can, how plants and animals resemble and differ from one another in this connection.

12. Write a note on perspiration. Justify the choice of clothing made of wool for winter wear.