

**AN ROINN OIDEACHAIS**  
(Department of Education).

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**INTERMEDIATE CERTIFICATE EXAMINATION, 1950.**

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**SCIENCE (Syllabus B).**

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**THURSDAY, 15th JUNE—MORNING 10 TO 12.**

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[Not more than *six* questions are to be attempted, of which three must be taken from Section I and *three* from Section II. Illustrate your answers wherever possible. All questions are of equal value.]

**SECTION I.**

1. Describe how you would find the weight of a litre of air in the laboratory.

Write down a list of the measurements you would make during the experiment and indicate clearly how the result is obtained from them.

2. What do you understand by evaporation ? In what respects does evaporation differ from boiling ? How would you show by experiment that a liquid whilst evaporating absorbs heat from its surroundings ?

Indicate how this absorption of heat by a liquid during evaporation helps to regulate the temperature of the human body.

3. What is meant by density ?

If you were given a quantity of lead shot, describe in detail how you would find the density of lead.

4. What do you understand by the following:—(a) element, (b) compound, (c) mixture, (d) physical change, (e) chemical change, (f) catalyst ? Give one example of each.

5. Describe how you would use (i) carbon, (ii) an acid to prepare carbon dioxide. Tell how you would collect the carbon dioxide and mention its properties.

Show by reference to a suitable example that carbon dioxide is important in the life of green plants.

## SECTION II.

6. Mention the different ways in which fruits and seeds are dispersed and give one suitable example in each case.

By reference to *any three* of the examples you have mentioned, describe with the aid of a diagram in each case the special characteristic in the structure of the fruit or seed that aids in its dispersal.

7. (a) What are the main functions of the stem of a green plant? Describe an experiment to demonstrate one of these functions.

(b) Mention and describe two examples to illustrate modifications for special purposes in the stems of certain green plants, and in each case mention the special purpose of the modification.

8. What are the functions of the following in plant life:—  
(i) root hairs, (ii) lenticel, (iii) chlorophyll, (iv) stomata, (v) anthers, (vi) stamens?

9. Describe, with the aid of a diagram, the arrangement of the bones of the right leg and name the bones.

10. Describe, with the aid of a diagram the circulation of the blood in the human body.

What are the functions of the blood?

How do fresh air and suitable exercise help in keeping the blood pure?