

AN ROINN OIDEACHAIS.
(Department of Education).

BRAINNSE AN MHEADHON-OIDEACHAIS
(Secondary Education Branch).

INTERMEDIATE CERTIFICATE EXAMINATION, 1938.

LOWER COURSE.

SCIENCE (Syllabus D).

MONDAY, 20th 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 is a thermometer? Distinguish between a Centigrade and Fahrenheit thermometer. State the reading on each of these if placed in (a) boiling water, (b) a hot bath, (c) melting ice.
2. An object is found to weigh 52.46 gms. in air, 45.32 gms. when immersed in water and 44.00 gms. when immersed in milk. Explain why the weighings differ. What do the weighings tell us of the relative density of milk?
3. What do you understand by latent heat? Illustrate your answer by referring to four examples of latent heat met with in your ordinary experience.
4. Describe any demonstration you have seen carried out to show that air exerts pressure. Why do we not feel this pressure?
5. Find the weight of a packet of tea which when hung 8 inches from the centre of a uniform stick 20 inches long, just balances 1 lb. of sugar hung one-half inch from the other end.
N.B.—All calculations are to be shown.
6. Describe demonstrations you have seen carried out to show that a similar chemical change takes place when (a) a coal fire burns, (b) rust forms on a saucepan.
7. Sketch the alimentary canal and give the functions of its several parts.

8. State the changes that take place in the blood and air during respiration.

9. What first-aid treatment would you give to—

(a) a girl whose clothes are on fire;

(b) a girl who has cut an artery, telling how you would recognise the cut as arterial;

(c) a girl who has spilled acid on her hand?

10. What is the advantage of having a teapot with a bright surface and a range with a dull one? Describe a demonstration to support your answer.

11. Name 4 soluble and 4 insoluble substances used in a house. Describe in detail how it is found in the laboratory whether a substance is or is not soluble in water.

12. Tell how the hardness of two samples of water may be compared. Arrange (a) sea water, (b) rain water, (c) tap water in the order of their hardness, and tell how the hardness may be removed from (a) and (c).

