

LEAVING CERTIFICATE EXAMINATION 1997

CONSTRUCTION STUDIES - PART I (THEORY)

ORDINARY LEVEL

THURSDAY, 26 JUNE - 2.00 - 4.30

(200 marks are allotted to this paper)

5415

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- (a) Answer Question 1 and three other questions.
 - (b) Answers must be written in ink; drawings and sketches to be made in pencil.
 - (c) Write the number of the questions distinctly in the margin of the paper before each answer.
 - (d) Freehand sketches or diagrams to illustrate written descriptions should be made.
 - (e) The name, sizes, dimensions and other necessary particulars of each material indicated must be noted on the drawing.
 - (f) *All questions carry equal marks.*
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1. A timber window frame with outward opening sash is fixed in a 300 mm thick insulated cavity wall. Draw to a scale of 1:5, a vertical section through the lintel showing constructional details from 200 mm above the concrete lintel to 200 mm below.
2. Discuss, with the aid of sketches, an approved method of sewage disposal suitable for a dwelling in a rural area and outline the principles by which it works.
3. Sketch, to a scale of 1:10, a vertical section through the bottom two steps of a straight flight of timber stairs. Include in your sketch the newel post and handrail.
4. Describe, and list in order of priority, precautions which should be taken to prevent domestic plumbing pipes bursting during frosty weather. What additional precautions should the householder take if the house is going to be vacant for a number of days?
5. List the most common defects that occur in flat roofs and describe with the aid of sketches how they may be avoided or, if they occur, rectified.
6. Discuss, with the aid of sketches where necessary, the more common causes of accidents (a) on building sites OR (b) in the home. Suggest ways by which such accidents might be avoided.
7. A timber ground floor has been affected by dry rot. List the likely causes, and outline the remedial measures necessary to make good the floor and to prevent a recurrence of the problem.
8. Describe, with the aid of neat sketches, the nature and purpose of any FOUR of the following:
 - (a) arch;
 - (b) architrave;
 - (c) wallplate;
 - (d) rafter;
 - (e) collar tie.
9. Give an illustrated account of your Construction Studies project. Make particular reference to the way in which it was presented for examination. If you had had more time for it what additional work would you have done on it?