

LEAVING CERTIFICATE EXAMINATION 1996

CONSTRUCTION STUDIES - PART I (THEORY)

ORDINARY LEVEL

THURSDAY, 20 JUNE - 2.00 - 4.30

(200 marks are allotted to this paper)

-
- (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.*
-
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 window sill showing constructional details from 200 mm above the concrete sill to 200 mm below.
2. List, and explain, the common causes of condensation in modern houses? In each case state how you would set about curing the problem. Discuss measures, which might be taken at the design stage to reduce the risk of condensation.
3. Describe, and explain the purpose of, each of the operations which are necessary in preparing and painting
(a) new wood used internally; (b) previously painted external wrought iron gates.
4. In what ways can damp penetration damage a building? Describe and illustrate by means of sketches how damp penetration may be prevented in a typical domestic building.
5. List, in order of priority, parts of a domestic heating and plumbing system which could be advantageously insulated and indicate the types of insulation you recommend. List other ways in which heat can be unnecessarily wasted in a two-storey dwelling.
6. To a suitable scale sketch the following and state where they might be properly used:
(a) a mortice and tenon joint;
(b) a tongued and grooved joint;
(c) a bridle joint;
(d) a lapped dovetail joint.
7. The hall in a typical two-storey house is due for redecoration. Describe the types of floor covering, wall covering and light fittings you would recommend and give reasons for your choices.
8. Indicate by means of sketches where the following are located and describe their function in a living tree:
(a) Cambium layer;
(b) Sapwood;
(c) Medullary rays;
(d) Heartwood.
9. Give an illustrated account of your Construction Studies project. Make particular reference to the planning of it.