

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

LEAVING CERTIFICATE EXAMINATION 2001

## CONSTRUCTION STUDIES - PART I (THEORY)

ORDINARY LEVEL

WEDNESDAY, 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) To a scale of 1:5, draw a vertical section through the eaves of a tiled roof of 30 degree pitch. The roof is supported on a 300mm insulated cavity block wall.  
(b) On your drawing, show a method of ventilation for the roof at eaves level.
2. (a) Using notes and neat freehand sketches show the constructional details of:
  - (i) a non - loadbearing stud partition;
  - (ii) a non - loadbearing solid concrete block wall.  
(b) Using notes and neat freehand sketches show the constructional details necessary to incorporate a door opening in either the stud partition **or** the solid concrete block wall.
3. (a) Using neat freehand sketches, show in detail **two** types of foundations that are suitable for a dwelling house. Name each type of foundation.  
(b) Describe the soil conditions for which each type of foundation would be the most suitable.
4. (a) Using notes and neat freehand sketches, show a suitable system of sewage disposal for a dwelling house situated in a rural environment.  
(b) Describe **two** features of this system of sewage disposal that make it suitable for use in a rural environment.
5. (a) Using notes and neat freehand sketches, show the pipework and valves necessary for the provision of a cold water supply to a kitchen sink.  
(b) Using notes and neat freehand sketches, describe **one** design feature that allows the safe removal of waste water from a kitchen sink.
6. (a) Describe **three** locations where dampness may penetrate a building.  
(b) Select **one** of the locations mentioned and describe, using notes and neat freehand sketches, **two** precautions that could be taken at the construction stage of the building to prevent the possible penetration of dampness.
7. (a) Give **three** reasons why it is necessary to obtain planning permission for a dwelling house.  
(b) List the procedures to be followed and the documents to be prepared when making an application for Full Planning Permission for a dwelling house.
8. (a) Select **one** power tool or machine which is frequently used in the Construction Studies room. List **three** safety precautions that should be displayed prominently near this tool or machine and explain in detail the reasons for each safety precaution.  
(b) List **three** safety precautions that should be observed by students when engaged in practical work in the Construction Studies room.
9. Explain, with the aid of notes and neat freehand sketches, any **five** of the following:
  - (i) wall plate;
  - (ii) cornice;
  - (iii) rafter;
  - (iv) concrete lintel;
  - (v) vapour barrier;
  - (vi) architrave;
  - (vii) wall tie.