

THE INSTITUTE OF WOOD PRESERVING AND DAMP-PROOFING

Examination for National Certificate in Remedial Treatment

5 December 2007

MODULE 3: *The identification and remedial treatment of dampness.*

NOTES FOR CANDIDATES

1. Read the instructions and questions carefully.
2. Answers should be illustrated with sketches where appropriate.
3. Any abbreviations must be given in full when first used.
4. The duration of this written examination paper is 2 hours.
5. The paper consists of two sections which are assessed separately: both must be passed.
6. **All five** questions should be answered.

SECTION A

- 1 (This question should be answered in no longer than about **30 minutes**)

Outlined below are some basic facts about a property and a problem within it.

The property is a substantial semi-detached house built in the 1920s. The walls are solid 229mm (9") brickwork and a slate damp-proof course (dpc) is clearly evident. Internally, there are suspended timber floors in the reception rooms and the level of the dpc is compatible with these floors. In the entrance hall and kitchen, there are solid floors finished with ceramic tiles.

The owner, Mr G Jarvis, has asked you to investigate dampness in the walls to the front bay window which first became apparent during last winter and which is present when you inspect in December 2007.

Using your experience and knowledge, create and lay out a report including recommendations exactly as you would submit it to Mr Jarvis. A sketch plan of the ground floor is provided for you to add notes to and use as part of your report.

Do not include your own name or that of your company in the report.

SECTION B

- 2 Electrical moisture meters are commonly used for the detection and analysis of dampness in buildings.
 - 2.1 You obtain a reading of 18 per cent in a piece of built-in timber and, elsewhere, you obtain a reading of 18 per cent in brickwork. Do these materials have the same moisture content? Explain your answer.
 - 2.2 Explain why an electrical moisture meter should not be used to determine the effectiveness of a remedial chemical injection damp-proof course.
 - 2.3 Draw the pattern of moisture contents, showing variation with height and along the length of the wall, that you would expect to find for **both** of the following defects in the outside wall of a ground floor room:
 - (i) rising damp
 - (ii) a down-pipe with a leak 4ft above ground level.
- 3 Dampness in buildings due to condensation is of two major types.
 - 3.1 Name the two types, and for each describe the circumstances and conditions necessary for them to occur.
 - 3.2 How can an electrical moisture meter be used as an aid in diagnosing condensation?
 - 3.3 Describe the remedial measures you recommend when condensation is diagnosed.
- 4 Dampness in buildings is commonly caused by rising dampness.
 - 4.1 Describe how rising dampness occurs.
 - 4.2 Name the salts which accumulate in walls affected by rising dampness, describe where they occur and why they are significant.
 - 4.3 Describe briefly two alternative treatments for rising dampness in a solid 9" exterior wall to a room with a suspended timber floor.
- 5 Within the damp-proofing industry, a range of products are used in the control of damp.
 - 5.1 What is the primary function of a) water repellents, and b) water-proofers.
 - 5.2 Describe the circumstances when water repellents and water-proofers should be used.
 - 5.3 Give the name of the active ingredient and the type of formulation of the product that you normally specify for an injected damp-proof course and give brief details of the method of application.