

PROPERTY CARE ASSOCIATION

Examination for National Certificate in Remedial Treatment

1 March 2010

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** 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 V Gough, has asked you to investigate dampness in the walls to the front bay window which first became apparent during last winter.

Using your experience and knowledge, create and lay out a report including recommendations exactly as you would submit it to Mr Gough. 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) Name the two types of condensation found in buildings and describe the location and conditions when each type occurs.
- 3) Explain the procedure that you would use to identify each type of condensation referred to in question 2).
- 4) Describe briefly the remedial measures that you would recommend for each type of condensation referred to in question 2).
- 5) Name the salts which accumulate in walls affected by rising dampness, describe where they occur and why they cause disfigurement of the plaster.
- 6) Describe a plaster or render mix normally employed when re-plastering following treatment for rising dampness. If no damage is visible, would you still recommend re-plastering? Explain your answer.
- 7) Describe the mechanism by which a product based on polyoxo aluminium stearate prevents further rising dampness.
- 8) What action would you take on seeing a green area of algal growth, starting near the gutter, on the outside wall of a 19th century brick built property.
- 9) Describe the remedial measures that you would recommend for dampness at the base of a rubble filled wall.
- 10) Describe how you would undertake the diagnosis and reporting of dampness in a party wall.
- 11) Explain the principles of how a calcium carbide (Speedy) meter and a moisture meter of the electrical conductivity type determine the moisture content of a building material.
- 12) Describe the effects that mineral salts have on the accuracy of each of the types of meter listed in question 11).
- 13) A surveyor may have to interpret data from laboratory reports about samples removed from a wall and analysed. Give your interpretation of the data in the table below (all samples are mortar). Explain your answer.

Height up wall (mm)	Total moisture content (% wt/wt)	Hygroscopic moisture content (% wt/wt)	Capillary moisture content (% wt/wt)
1750	0.2	0.2	Nil
1500	0.3	0.3	Nil
1250	0.2	0.2	Nil
1000	4.1	3.8	0.2
750	8.4	2.8	5.6
500	10.0	2.1	7.9
250	15.0	1.2	13.8