

THE INSTITUTE OF WOOD PRESERVING AND DAMP-PROOFING

Examination for National Certificate in Remedial Treatment

12 March 2007

MODULE 2: *The identification and remedial treatment of infested timber.*

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 15 minutes.
 5. The paper consists of two sections which are assessed separately: both must be passed.
 6. **All five** questions should be answered.
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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 1930's semi-detached residence constructed of solid 9" brickwork incorporating a bitumen felt damp-proof course. The ground floor accommodation comprises a front room, rear room, kitchen and hall, all with suspended timber floors. The timber joists run parallel to the gable wall. You have been invited by the owner, Mr V Jones, to inspect the ground floor rooms for possible timber defects because the floor near the front wall has become progressively more 'bouncy'. You have been given permission to lift floorboards etc. On approaching the residence, you see only one corner of an air brick visible above ground level.

Using your experience and knowledge, create and lay out a report including recommendations exactly as you would submit it to Mr Jones. A sketch plan of the ground floor layout 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 When fungal growths or decayed wood are found in buildings, it is important to be able to identify the types of fungi responsible in order to determine the appropriate remedial treatment.
 - 2.1 Describe the features of decay and the fungal growths that enable you to distinguish *Coniophora puteana* from *Fibroporia vaillantii*.
 - 2.2 Describe the features of decay and the fungal growths of *Paxillus panuoides* and indicate where in a building you are most likely to find decay caused by this fungus.
 - 2.3 Give details of how you would eradicate decay caused by *Serpula lacrymans* in the ends of several ground floor joists, including ancillary works to ensure that there is no re-occurrence.

- 3 To select appropriate preservative treatment, it is necessary to be able to identify correctly the insect responsible for the damage found.
 - 3.1 Describe the features of attacked wood and associated structures that would lead you to suspect an infestation by sub-terranean termites.
 - 3.2 *Anobium punctatum*, *Lyctus brunneus* and *Ptilinus pectinicornis* all have exit holes of similar size and shape (i.e. 1-2 mm diameter, and circular). Give details of the other features of the damage caused that enable you to distinguish between the three insects.
 - 3.3 On occasion, wood already infested with wood-boring insects may be introduced into buildings. Describe the damage caused by **both** a forest longhorn beetle and a marine borer.

- 4 The species of timber and its natural characteristics are significant to the performance of wood in service.
 - 4.1 Describe the different characteristics of sapwood and heartwood in terms of how they are produced by the tree, their location in the tree, relative natural durability, treatability with wood preservatives etc.
 - 4.2 Describe briefly how the natural durability of timbers is determined and give an example of a timber fitting **each** of the following descriptions:
 - perishable hardwood
 - very durable hardwood
 - non-durable softwood
 - durable softwood.

- 4.3 Explain why beech is chosen for furniture but not for external joinery.
- 5 Timber in buildings requires a certain moisture content before decay flourishes.
- 5.1 Define what is meant by the term 'moisture content' and explain how moisture content is determined without the use of a moisture meter.
- 5.2 Describe the action would you take on obtaining a moisture content reading of 18 per cent in a ground floor skirting board associated with a suspended timber floor in a centrally heated house.
- 5.3 When surveying a terraced house with a solid floor back extension, list the possible sources of moisture leading to decay in a suspended timber ground floor in the original part of the house.