



Candidate Number:

Candidate Name:

Centre Number/Name:

**RHS (LEVEL 3) ADVANCED CERTIFICATE/DIPLOMA
IN HORTICULTURE WRITTEN EXAMINATION**

Wednesday 7th February 2007

IMPORTANT – Please read carefully before commencing.

- i) The duration of the papers in Module J is **2 hours**.
- ii) Answer **ALL** questions in Section A.
- iii) **ALL** questions in Section A carry equal marks.
- iv) Write your answers legibly in the spaces provided.
- v) Use metric measurements **ONLY**.
- vi) Where plant names are required, they should include genus, species and where appropriate, cultivar.

Module J

**Establishment & Maintenance of Decorative Ornamental Turf,
Plant Selection, Establishment & Maintenance,
Hardy Ornamental Nursery Stock.**

Section A – Short Answer Questions

Please turn over/.....

ANSWER ALL QUESTIONS

MARKS

Q1 List **FOUR** suitable ingredients for compost in hardy nursery stock production. **2**

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Q2 State **TWO** factors that are required to calculate seed sowing rates. **2**

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Q3 State the recommended grading requirements for a **NAMED** tree **OR** shrub. **2**

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Q4 State **TWO** advantages of using hollow tine aerators for the maintenance of fine turf. **2**

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Please see over/.....

ANSWER ALL QUESTIONS

MARKS

Q5 State what is involved in the renovation of a lawn and the time it is carried out. **2**

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Q6 State **TWO** advantages and **TWO** limitations of establishing a fine grass lawn from seed as compared with turf. **2**

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Q7 State **TWO** examples of bulbs **OR** corms for autumn display in an alpine trough. **2**

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Q8 Distinguish between hardy and half-hardy bedding plants. **2**

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Please turn over/.....

ANSWER ALL QUESTIONS

MARKS

Q9 List **FOUR** potential hazards when pruning roses.

2

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Q10 Describe the seasonal pruning of a **NAMED** evergreen subject used for hedging.

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IN HORTICULTURE WRITTEN EXAMINATION**

Wednesday 7th February 2007

IMPORTANT – Please read carefully before commencing.

- i) The duration of the papers in Module **J** is **2 hours**.
- ii) Answer **ONE** question **ONLY** from each of the Sections **B, C** and **D**.
- iii) **ALL** questions carry equal marks.
- iv) Write your answers legibly in the answer booklets provided.
- v) Use metric measurements **ONLY**.
- vi) Where plant names are required, they should include genus, species and where appropriate, cultivar.

Module J

**Establishment & Maintenance of Decorative Ornamental Turf,
Plant Selection, Establishment & Maintenance,
Hardy Ornamental Nursery Stock.**

Sections B, C & D

Structured Questions

Please turn over/.....

Section B – Establishment & Maintenance of Decorative
Ornamental Turf

Answer ONE question only from this section

MARKS

- Q1** Describe how environmental conditions can be adjusted to minimise the establishment and spread for **EACH** of the following:
- i) moss; **6**
 - ii) perennial weeds; **6**
 - iii) fungal diseases. **8**
-
- Q2 a)** Explain how the grass surface is affected by the following cutting methods:
- i) cylinder blades; **6**
 - ii) rotary blades. **6**
- b)** Describe **FOUR** risks involved in using a ride on cylinder mower in public areas. **8**
- c)** Explain how **THREE NAMED** risks from b), can be safely managed in the work place. **6**

Please see over/.....

Section C – Plant Selection, Establishment & Maintenance

Answer ONE question only from this section

MARKS

- Q3 a)** List the annual maintenance requirements for an established herbaceous border. **8**
- b)** Describe the horticultural merits of **FIVE NAMED** perennials and relate them to their cultural requirements. **10**
- c)** State **TWO** methods of maintaining the continuity of colour between spring and summer. **2**
-
- Q4 a)** Explain why the plant/animal balance is important in the maintenance of a garden pond. **8**
- b)** Devise an annual maintenance schedule for a garden pond, which includes the following types of plants:
- i) floating aquatics;
 - ii) aquatics growing in containers;
 - iii) submerged aquatics. **12**

Please turn over/.....

Section D – Hardy Ornamental Nursery Stock

Answer ONE question only from this section

MARKS

Q5 Describe how **EACH** of the following factors affect the choice of a site for the field production of hardy ornamental nursery stock:

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|------|-------------------|----------|
| i) | local topography; | 5 |
| ii) | soil; | 5 |
| iii) | water supply; | 5 |
| iv) | access. | 5 |

Q6 Describe the production of field grown bush roses under **EACH** of the following headings:

- | | | |
|------|--------------------------------|----------|
| i) | propagation; | 8 |
| ii) | crop maintenance; | 8 |
| iii) | harvesting and transportation. | 4 |



RHS (LEVEL 3) ADVANCED CERTIFICATE/DIPLOMA IN HORTICULTURE WRITTEN EXAMINATION

Wednesday 7th February 2007

Module J

Establishment & Maintenance of Decorative Ornamental Turf, Plant Selection, Establishment & Maintenance, Hardy Ornamental Nursery Stock.

Examiners Report

Candidates Registered
Candidates Entered
Candidates Absent
Candidates Deferred
Candidates Withdrawn

Total Candidates Passed
Passed with Commendation
Passed
Failed

Section A – Short Answer Questions

Q1 List **FOUR** suitable ingredients for compost in hardy nursery stock production.

Some Candidates listed loam without stipulating it should be sterilised for nursery stock compost.

Q2 State **TWO** factors that are required to calculate seed sowing rates.

On the whole this question was well answered by the majority of candidates.

Q3 State the recommended grading requirements for a **NAMED** tree **OR** shrub.

This question was poorly answered by the majority of candidates, most candidates did not stipulate the age of the stock and/or its form.

Q4 State **TWO** advantages of using hollow tine aerators for the maintenance of fine turf.

This was well answered by most candidates who appreciated that hollow tining resulted in comparative lack of soil compression, improved aeration and drainage and the facility to work top dressing/soil ameliorants into the holes created.

Q5 State what is involved in the renovation of a lawn and the time it is carried out.

A well-answered question most candidates understanding that lawn renovation is best started in the autumn but other various operations continue through out the growing season. Few candidates mentioned the need to assess the problems before embarking on a renovation program.

Q6 State **TWO** advantages and **TWO** limitations of establishing a fine grass lawn from seed as compared with turf.

Many of the candidates realised seed was the cheaper option with a chance to choose from a range of seed species and cultivars. Most stated the time required for establishment to be a disadvantage.

Q7 State **TWO** examples of bulbs **OR** corms for autumn display in an alpine trough.

This question was poorly answered, many candidates falling back on species too large for anything less than a massive container (*Colchicum*) or not sure of the following times. Some did not name suitable species when the Genera contained both winter and spring flowering species.

Q8 Distinguish between hardy and half-hardy bedding plants.

Some candidates implied but did not state the correlation between frost and hardiness and the length of the bedding plant life cycle. Hardy plants can spend their whole lives outdoors whereas half-hardy plants subject to damage by frost spend approximately half their lives under cover in a protected environment.

Q9 List **FOUR** potential hazards when pruning roses.

This question was answered well by the majority of candidates, but note that tearing clothes is not a hazard to the person but to the clothes.

Q10 Describe the seasonal pruning of a **NAMED** evergreen subject used for hedging.

A range of answers came from this question. Some candidates did not name secateurs as the correct pruning tool for large leave subject. Instead they suggested using a mechanical hedge trimmer or hand shears more suited to smaller leaved subjects like *Taxus*. Other candidates wrote about renovation when seasonal pruning was called required.

Structured Questions

Section B – Establishment & Maintenance of Decorative Ornamental Turf

Q1 Describe how environmental conditions can be adjusted to minimise the establishment and spread for **EACH** of the following:

- iv) moss;
- v) perennial weeds;
- vi) fungal diseases.

Most candidates appreciated that in controlling mosses, weeds and diseases depended on maintaining good healthy grass growth.

The question did ask about environmental conditions rather than the chemical cures suggested by a number of answers. The answers about weeds were however weaker than the other two sections. More specifics might have been appropriate when dealing with diseases but the moss section was generally well answered.

Q2 a) Explain how the grass surface is affected by the following cutting methods:

- iii) cylinder blades;
- iv) rotary blades.

b) Describe **FOUR** risks involved in using a ride on cylinder mower in public areas

c) Explain how **THREE NAMED** risks from b), can be safely managed in the work place.

The first part of this question was generally well answered. In some cases the second part contained a great deal of duplication in relation to the presence of debris on the ground and none mentioned the part to be played by risk assessment in managing the risks. Although relevant to a degree a number referred to fuel and storage which ancillary to the operation of mowing.

Section C – Plant Selection, Establishment & Maintenance

Q3 a) List the annual maintenance requirements for an established herbaceous border.

This was well covered by most candidates, setting the answer out in a monthly or seasonally structured format. The tasks were well listed and described.

b) Describe the horticultural merits of **FIVE NAMED** perennials and relate them to their cultural requirements.

This answer was well completed, with good plants listed and good explanation of requirements for the specified plants.

c) State **TWO** methods of maintaining the continuity of colour between spring and summer.

This answer was only partly well described but lacking in detailed examples of the methods used.

- Q4 a)** Explain why the plant/animal balance is important in the maintenance of a garden pond.

Good descriptions were generally provided with regards to the creation of a balance in the pond.

- b)** Devise an annual maintenance schedule for a garden pond, which includes the following types of plants:

- iv) floating aquatics;
- v) aquatics growing in containers;
- vi) submerged aquatics.

The maintenance schedule of a pond was well described again best set into seasonal tasks but limited detail was given regarding the types of plants identified in the question.

Section D – Hardy Ornamental Nursery Stock

- Q5** Describe how **EACH** of the following factors affect the choice of a site for the field production of hardy ornamental nursery stock:

- v) local topography;
- vi) soil;
- vii) water supply;
- viii) access.

Candidates who responded by describing the factors under recognisable headings with reasons gained the highest marks.

The affects of local typography in respect of aspect, light, shade, effect on early spring growth; the slope and its practical implications i.e. air flow (wind damage), frost pockets were well understood by the majority of candidates.

The implications on production in relation to soil again were well documented and were properly linked to practical soil management, these included; soil texture, structure, depth, drainage, pH, fertility and water holding.

In respect to water supply; this was not answered as authoritatively in most cases. Many of the answers provided mentioned natural water sources; rivers, well boreholes etc, however little reference was made to current legislation, abstraction licensing or regional variation in respect its effect on water quality. What was disappointing to note was that no consideration was given to alternative water sources or recycling of water on site.

Finally access was interpreted by the majority of candidates to mean just physically accessing the site, which was acceptable providing that the answer contained for example reference to local transport networks/systems, movement of large pieces of machinery, the delivery of goods, other considerations such as traffic, small lanes, weak bridges. However candidates that considered access in the wider sense to include access to labour, local markets etc. received full marks.

Q6 Describe the production of field grown bush roses under **EACH** of the following headings:

- iv) propagation;
- v) crop maintenance;
- vi) harvesting and transportation.

A description of the production of field grown Roses required candidates to provide an account under three distinct headings. Candidates who clearly described production that included good technical content, under identifiable headings received the highest marks. Propagation commenced with rootstock selection, supply and establishment. Most candidates correctly described the ideal source of bud wood, collection, preparation and storage. However details of timing, technique (some candidates referred to 'chip budding' which was not appropriate), success rates and aftercare were less well described, answers lacked detail. In the majority of cases candidates provided good responses in respect of maintenance; irrigation, weed, pest and disease control. What was not clearly demonstrated was an understanding of commercial lifting (including defoliation) handling and transportation.

Some candidates chose to include diagrams, but the majority were poorly drawn, lacked labelling and were not linked to the text, therefore in many instances it was not possible to award marks.

It was noticeable that some candidates had very little knowledge of the commercial production of field grown Roses, this was demonstrated by a lack of technical content.

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