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Essential Information.

What to expect from the exam and how to prepare.

There is one exam for Units 1 - 4 and one exam for Units 5 - 8. Both exams follow the same format, assessing their respective subject content. Although the exams are sat separately and could be done in any order, it's imperative to complete Unit 1 – 4 content before undertaking the second examination; a lot of terms, e.g. understanding how plants are named, parts of plants, etc., is required to enable full engagement with Units 5 – 8.

All candidates either sign up to study the course with an approved centre (usually a college or garden-based education centre) or undertake distance learning via a distance learning provider. Either option has an associated cost (check with individual providers).

The RHS is a qualifying body for this qualification. It does not teach the course. All course related questions are best directed to learning centres. To find a centre near you, internet search 'RHS find a centre' and click on the RHS link (usually the first hit) – you can search for a nearby centre using a postcode or town/city name.

The exams

- Each exam is two hours. The exams can either be paper based at a designated centre, or undertaken online.
- Exams are offered in February and June.
- Candidates typically study Unit 1 - 4 content from September until the February exam, and then study Unit 5 - 8 content for the June exam.
- It is not possible to register to sit the exam as an independent individual directly with the RHS, you will need to be registered with an approved centre – these can be found on the RHS website (search 'RHS approved centre').
- Both exams follow the same format, comprising two sections:
 - First section:
 - Multiple choice
 - 20 multiple choice questions (20 marks).
 - This a mix of knowledge recall and applied knowledge questions.
 - Second section:
 - Written answers
 - Shorter answer questions, usually split into sections, e.g. Q1. a), b), c).
 - Totalling 80 marks.
 - These all have command verbs such as 'identify', 'outline', 'describe', 'explain'.
 - Marks for each part of a question vary from 1 mark (e.g. for a 'identify' command verb), to 4+ marks (e.g. for an 'explain' command word).

Grading:

- >80% Distinction
- 65 – 79% Merit
- 50 – 64% Pass
- <50% Fail

You must achieve a minimum of 50% to pass the exam.

How to prepare for the exams

Do not leave revision until the last minute. There is too much content, even for the most seasoned crammer.

Little and often is the most important approach. Your home studying must be consistent every week. Do not think of this as a 'just turn up to class, revise a month before the exam' sort of course. This will not work. There is too much content and additional expectation that you can make cross-links within and between the unit content, as well as draw in the four qualification-wide outcomes. You'll need to incrementally build your knowledge throughout the course study time:

If you are studying in classes at a centre:

- Make sure you have a timetable detailing what you'll learn in each session.
- A day or two before each class, set aside an hour or so to read through the upcoming lesson content (for example by reading the relevant content in this guide) *before* you are taught it by your lecturer. You could also listen to the relevant content via the free audio guides: www.learnhorticulture.co.uk/hortaudio
 - This is called pre-learning and it's one of the biggest game changers for learning.
 - You will arrive to your lectures armed with knowledge that can be reinforced and developed in your classes.
 - It's far more effective to use class time to build into a framework knowledge, rather than newly learn everything from lectures.
 - This means you will build stronger neural networks around the subject content because you have more memory cues knitted together.

If you're distance learning, and for in-class learners, the following applies after you've first read through new content, or after content you've covered in class:

- *After* each session it's important to reinforce your knowledge. There are many ways to do this:
 - Any time you're around plants/gardens (e.g. walks in the park, garden visits, tending your own garden or houseplants) try to link knowledge, e.g. naming nodes, internodes, lamina, flower parts, the benefits of flowers to pollinators, how nutrients are transported up stems via the transpiration stream, what pests or pathogens (diseases) could affect your plants, why that mulch is benefitting your soil and plant health, etc. – all of this reinforces your knowledge in a positive and helpful context.
 - You could write out notes and diagrams from memory and compare to your lecture notes or this book; this will also build a bank of revision notes.
 - Write flashcards, with key terms on one side and definitions on the other – this allows you to test your knowledge (you might find the Leitner system helpful – run an internet search for 'Leitner flashcard').
 - Use this book to share testing of knowledge with a course mate. This is particularly useful for auditory learners, and by speaking/listening you add another layer of imprinting key knowledge into your memory.
 - Recite knowledge to yourself (either in your head, or out loud) – some people find it useful to imagine they are explaining it to another person or even teaching a class; this focuses yourself on being clear and concise with your recited knowledge and explanations.
 - Auditory learners can benefit from recording voice notes and replaying them. There are also free, downloadable audio guides on the accompanying website: www.learnhorticulture.co.uk/hortaudio
 - You must build in short chunks of time for going back to earlier content. Committing knowledge to long term memory takes repetition. This is why building a bank of flashcards, concise notes or other memory cues is essential. Return to these regularly to pull knowledge with you. It gets easier – as knowledge becomes more ingrained you recall it with greater ease.
- You must focus on learning in a way that suits you and fits into your life. Find what works and stick to it.
- You must be consistent. Put reminders into your calendar. Tell loved ones to cook dinner or mind the kids whilst you study, etc. Once you're in a routine it gets easier.
- Build in down-time. Studying a course you're interested in is great, but you need time to relax and balance your life. Time off studying is as important as time spent studying.
- Chunk your study time. 25 mins on, 5 mins off. You can't study for more than a few hours without needing a proper break.

Qualification-wide outcomes

Health and Safety

Sustainability

Best Practice

Equality and Diversity

The qualification wide outcomes link into all aspects of the syllabus for Units 1 - 8. They're essential knowledge for understanding your rights within horticulture as an employee, or your obligations as an employer, as well as guiding thinking around sustainability and professionalism.

Health and Safety

There are three syllabus points, explored below:

1. Candidates should have a knowledge of the following legislation, relating to horticulture:

- Health and Safety at Work Act (1974)
- Electricity at Work Regulations (1989)
- Personal Protective Equipment at Work Regulations (1992)
- Management of Health and Safety at Work Regulations (1999)
- Manual Handling Operations Regulations (1992) as amended (2002)
- Control of Substances Hazardous to Health (COSHH) (2002)
- Control of Noise at Work Regulations (2005)
- Working at Height Regulations (2005)
- These are overviewed with horticultural perspective below. Candidates only need to know the names of the act and a few details relating to horticulture. The Health and Safety at Work Act (1974) is given more detail – it's the broadest Act [for the exam you may find this the most useful one to remember as it's the most broadly applicable to a range of work health and safety issues].

Health and Safety at Work Act 1974:

- This legislation is designed to **ensure all employers provide a safe work place for their employees, visiting contractors, temporary workers, and members of the public visiting the workplace** – 'as far as is reasonably practical'.
- The legislation is relevant to employers, employees and contractor/self-employed workers who bring someone on site who is working for them.
- Employers must appoint a designated, competent person to oversee health and safety.
- The main points of the HASAWA:
 - **Ensure a safe place of work** by ensuring fire safety, waste management, cleanliness and handling of harmful substances. Risk assessments must be provided for work tasks.
 - In accordance with risk assessments, **personal protective equipment (PPE) must be provided; equipment** such as mowers, strimmers, computers, etc. **must be maintained to ensure they're safe.**
 - Provide **training to ensure staff safety**, such as manual handling, fire safety, first aid, etc. Staff have a duty to take note of the training points and apply them in their work in order to keep themselves and others safe.
 - **Provide facilities such as toilets, drinking water, heating** in indoor workspaces; kitchen appliances provided by employers must be checked (e.g. an annual electrical safety test) and maintained.



PPE such as thick gloves must be provided to protect against sharp plant parts and cutting equipment such as secateurs.

Electricity at Work Regulations (1989):

- Designed to minimise electrical hazards and risks in workplaces.
- Applies to employers, employees and self-employed persons on-site.
- Includes need for PAT testing (annually, every 6 or 3 months, depending on the equipment).

- **Soil health:** (full detail in Unit 3) healthy soils have a significant carbon store, and many soils increase their soil carbon store over time. Horticultural activities can reduce a soil's carbon store and release carbon dioxide into the atmosphere. In addition, soil biodiversity can be reduced through poor soil management, and excessive irrigation of soil can cause leaching of nutrients (full detail in Unit 3).



This allotment site has been mulched to improve water retention and soil.

- **Cultivation** (digging, forking, rotavating, ploughing) **should be avoided**. Instead, **soils should be mulched with organic matter**. This increases the soil carbon store and fosters a biodiverse soil fauna, making the soil more resilient and fostering potential for beneficial symbiotic relationships between soil fungi and plant roots.
- **Soils should not be irrigated** unless it's to aid establishment of new plants. Irrigation should be carefully undertaken and not be excessive to prevent leaching of nutrients. **If 'right plant, right place' is adhered to, established plants will not need irrigating**. This is an evolving process as climate change impacts gardens.
- **Monocultures** of plants, where just one species or cultivar (variety) of plant is grown, has a negative environmental impact. Monocultures do not foster a rich biodiversity and are susceptible to a particular pest or pathogen affecting the whole crop. An example is rose gardens, where roses are more likely to suffer from severe black spot (a fungal disease) because they're grown in close proximity and the fungal spores can readily transfer from plant to plant via rain splash.
 - **Where it's not a historic site preserving a particular planting style, do not plant a monoculture** (and historic sites may reduce or even eliminate traditional monoculture planting). There is a nuanced debate around e.g. bedding monocultures in some historic settings. However, in the vast majority of gardens this is not an issue and monocultures should be eliminated, **instead favouring a diverse planting palate**.
- **Peat usage** (as a growing media for potted plants) destroys bog habitats, which are carbon sinks (accumulate carbon slowly over time to help prevent global warming and climate change). Peat takes many thousands of years to form and it's not replaceable on human timescales, making it **non-renewable**.
 - There are plenty of **peat free composts** and these should be used, not peat. Peat is being phased out (see Unit 3.5).



A monoculture of *Begonia semperflorens* cv. is not optimal for increasing biodiversity.

2. How horticulture contributes to the three pillars of sustainability:

- **Environmental Protection** is detailed above and throughout this guide. The main factors relate to reducing carbon footprint and water footprint (from irrigation). Reducing, or better eliminating, pesticides. Fostering biodiversity and healthy soils.
- **Social Equity** can relate to horticulture improving people's mental health and building a sense of community, e.g. via volunteering opportunities. Horticulturalists have a responsibility to ensure they source products that don't exploit people, for example purchasing from companies that pay their staff the living wage (or above) rather than minimum wage.
- **Economic Viability** can relate to supporting local businesses, benefitting the local economy; this also reduces the transport carbon footprint of whatever product is purchased. It can also relate to potential for a horticultural business, e.g. a public garden or maintenance company, to sustain itself. Profits will be needed to allow purchasing of essential products, like PPE or replacements for equipment that can't be repaired.