Unit:

Overview of Examination

Levels of demand

Questions were set at three levels of demand within this paper.

Questions that require a recall of basic factual knowledge are classified as being **low demand**.

Questions that require the recall of more technical concepts or the application of knowledge are classified as **medium demand**.

Questions that require the recall of advanced technical concepts, the application of these concepts and the integration of these concepts across topics are classified as **high demand**.

General comments

An analysis of scripts has indicated that strong candidate responses shared many common characteris cs:

planned out their me for Sec on A, B, and C
provided concise, well developed responses
correctly used appropriate technical hor cultural terminology
gave full scien fic names, when providorove,a Ţ elop Å oE À l'e ɋ ʻ el ɳ u e ŏ

Qualification specification and Guidance Document

Centres and candidates are reminded that the Qualification Specification follows current best practice. The Assessment Outcomes are written at AO1, AO2 and AO3, with broad descriptors.

The Guidance Document was developed to provide guidance with regards to the interpretation of these Assessment Outcomes in terms of breadth and depth that is appropriate to a Level 2 qualification.

It should be noted that the Guidance Document is not intended to be a comprehensive guide to teaching and learning. Instead, it is designed to provide examples of some of the key areas contained within an Assessment Outcome. As an example, where an Assessment Outcome in the Qualification Specification formally lists five areas that should be included, the Guidance Document may only unpack one of these areas as an example. The centre is then expected to apply the level of breadth and depth given in the exemplar to the other areas defined in the Assessment Outcome.

Questions may therefore be set on areas that are not explicitly stated in the guidance document. All questions set fully reflect the aims of the Assessment Outcomes, and the examples of breadth and depth given within the guidance document.

The next full review of the Guidance Document will be published for the teaching year commencing September 2024.

Sec on A

Ques ons 1 – 20

General comments on Sec on A

Forced answer ques ons are designed to test candidate's knowledge and understanding of the concepts covered in the 4 Topics and the 4 Qualifica on-wide outcomes that make up p

Sec on B

Ques on 2

This ques on required candidates to apply their knowledge of soils to new scenarios and situa ons, which is consistent with the requirements of Level 2 qualifica ons. While some candidates scored high marks with this ques on, many candidates scored lower marks in this ques on.

Candidates were required to demonstrate their knowledge, rela ng to the role of organic ma t er in making soils more resilient to climate change. An example response was provided to guide candidates on the expected depth and breadth of response required.

Strong candidate responses correctly stated that:

- a strong crumb structure in the soil will be more resilient to high levels of rainfall, which are increasing as the climate changes
- strong crumb structures lead to reduced capping a er major rainfall events
- strong crumb structures are more resistant to water erosion, or damage during flooding
- strong crumb structures allow ease of access for roots, the presence of which increases the soil's resilience to erosion.

Weaker candidates gave par al responses which correctly stated the role of organic ma t er in the soil, but which did not apply this knowledge to the role of organic ma t er in making soils more climate resilient.

Weaker responses provided answers that shared knowledge that was not requested as part of the ques on, for example the role of organic ma t

Ques on 3

This ques on required candidates to demonstrate their knowledge of plant nutri on, with specific reference to the role that the major plant nutrients, Nitrogen, Phosphorus and Potassium have on plant health.

Strong candidate responses clearly stated the role of Nitrogen, Phosphorus, and Potassium in promo ng plant health.

Stronger candidate responses included:

> Nitrogen promotes plant health, as it is a cons tuent of chlorophyll, which enables photosynthesis, and creates carbohydrate which is used in plant health processes
> Phosphorus promotes plant health by enabling the healing of damaged ssue
> Potassium promotes plant health, as it is involved in the promo on of cold hardiness reducing the damage caused by frost, which impacts on plant health.

Weaker candidate responses o en stated the role of Nitrogen, Phosphorus, and Potassium but did not relate their responses to plant health. This was required in the stem of the ques on, and cM ĭ Ŗ caenot Ū aƯ ═ , qHuc Ŀ ═ he , ol 3
W ☒

Ques on 5

This ques on required candidates to explain the term F_1 Hybrid.

Strong candidates were able to correctly explain the term F_1 Hybrid by sta ng that an F_1 Hybrid is produced through the cross fer lisa on of two pure bred plants to produce seeds, which are referred to as the first filial genera on.

Weaker candidate responses o en stated that the plants were hybrids, but did not express the required level of technical detail to be awarded 2 marks.

Strong candidate responses included:

Xylem delivers water to maintain cell turgidity
Xylem delivers water for photosynthesis
Xylem delivers soluble nutrients used in photosynthesis
Phloem delivers sugars to areas of ac ve growth
Phloem moves I PaDŽDŽ ñ DŽDŽ ╖ DŽ È ra or

Sec on C

Sec on C candidate responses are graded against the assessment ladder, which is on the next page of this report. Candidates and centres are advised to review the ladder as this indicates how the assessment decisions are made, when grading long form responses.

Candidate performance in Sec on C ranges from those candidates who:

- were prepared to produce long form respo[illegible]

	Mark range	Summary	Description

Ques on 4

This ques on required candidates to describe the process of transpira on in plants, and then to suggest a range of factors that can influence the process of transpira on. Finally, candidates were asked to describe how these factors can be mi gated in a garden situa on.

Candidates who scored marks in the higher bands:

accurately described the process of transpira on
suggested a wide range of factors that can influence the process of transpira on:

s ac Ŕ Ŕ š ueerE } Ǐ Ǵ m § o Mue