

Marking Scheme
Strictly Confidential
(For Internal and Restricted use only)
Senior Secondary School Certificate Examination, 2025
SUBJECT NAME HORTICULTURE (Q.P. CODE 340)

General Instructions: -

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| 1 | You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully. |
| 2 | “Evaluation policy is a confidential policy as it is related to the confidentiality of the examinations conducted, Evaluation done and several other aspects. Its’ leakage to public in any manner could lead to derailment of the examination system and affect the life and future of millions of candidates. Sharing this policy/document to anyone, publishing in any magazine and printing in Newspaper/Website, etc. may invite action under various rules of the Board and IPC.” |
| 3 | Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one’s own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and due marks be awarded to them. In class-XII, while evaluating two competency-based questions, please try to understand given answer and even if reply is not from marking scheme but correct competency is enumerated by the candidate, due marks should be awarded. |
| 4 | The Marking scheme carries only suggested value points for the answers These are in the nature of Guidelines only and do not constitute the complete answer. The students can have their own expression and if the expression is correct, the due marks should be awarded accordingly. |
| 5 | The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. If there is any variation, the same should be zero after deliberation and discussion. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators. |
| 6 | Evaluators will mark($\sqrt{}$) wherever answer is correct. For wrong answer CROSS ‘X’ be marked. Evaluators will not put right (\checkmark) while evaluating which gives an impression that answer is correct and no marks are awarded. This is most common mistake which evaluators are committing. |
| 7 | If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totaled up and written in the left-hand margin and encircled. This may be followed strictly. |
| 8 | If a question does not have any parts, marks must be awarded in the left-hand margin and encircled. This may also be followed strictly. |
| 9 | If a student has attempted an extra question, answer of the question deserving more |

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| | marks should be retained and the other answer scored out with a note “ Extra Question ”. |
| 10 | No marks to be deducted for the cumulative effect of an error. It should be penalized only once. |
| 11 | A full scale of marks _____(example 0 to 80/70/60/50/40/30 marks as given in Question Paper) has to be used. Please do not hesitate to award full marks if the answer deserves it. |
| 12 | Every examiner has to necessarily do evaluation work for full working hours i.e., 8 hours every day and evaluate 20 answer books per day in main subjects and 25 answer books per day in other subjects (Details are given in Spot Guidelines).This is in view of the reduced syllabus and number of questions in question paper. |
| 13 | <p>Ensure that you do not make the following common types of errors committed by the Examiner in the past:-</p> <ul style="list-style-type: none"> • Leaving answer or part thereof unassessed in an answer book. • Giving more marks for an answer than assigned to it. • Wrong totaling of marks awarded on an answer. • Wrong transfer of marks from the inside pages of the answer book to the title page. • Wrong question wise totaling on the title page. • Wrong totaling of marks of the two columns on the title page. • Wrong grand total. • Marks in words and figures not tallying/not same. • Wrong transfer of marks from the answer book to online award list. • Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.) • Half or a part of answer marked correct and the rest as wrong, but no marks awarded. |
| 14 | While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as cross (X) and awarded zero (0)Marks. |
| 15 | Any unassessed portion, non-carrying over of marks to the title page, or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously. |
| 16 | The Examiners should acquaint themselves with the guidelines given in the “ Guidelines for Spot Evaluation ” before starting the actual evaluation. |
| 17 | Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words. |
| 18 | The candidates are entitled to obtain photocopy of the Answer Book on request on payment of the prescribed processing fee. All Examiners/Additional Head Examiners/Head Examiners are once again reminded that they must ensure that evaluation is carried out strictly as per value points for each answer as given in the Marking Scheme. |

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MARKING SCHEME

HORTICULTURE

SECTION A
OBJECTIVE TYPE QUESTIONS

| | | | Source | Chapter No. | Page No. | |
|----|-------|----------------------------|--------|----------------|-------------|---|
| 1. | (i) | (D) Remove | NCERT | 1 | 5 | 1 |
| | (ii) | (C) Paranoid | NCERT | 2 | 35 | 1 |
| | (iii) | (B) CTRL + B | NCERT | 3 | 66 | 1 |
| | (iv) | (A) French | NCERT | 4 | 90 | 1 |
| | (v) | (B) Water conservation | NCERT | 5 | 116 | 1 |
| | (vi) | (C) Perseverance | NCERT | 4 | 103 | 1 |
| 2. | (i) | (D) Phalaenopsis | CBSE | 1 | 5 | 1 |
| | (ii) | (A) Suntory and Florigene | CBSE | 1 | 8 | 1 |
| | (iii) | (A) Cold storage | CBSE | 2 | 19 | 1 |
| | (iv) | (B) Public area | CBSE | 3 | 27 | 1 |
| | (v) | (C) Fragrance | CBSE | 3 | 30 | 1 |
| | (vi) | (C) Arches | CBSE | 4 | 34 | 1 |
| | (vii) | (B) Archicad | CBSE | 5 | 44 | 1 |
| 3. | (i) | (A) <i>Zoysia japonica</i> | CBSE | 6 | 49 | 1 |
| | (ii) | (B) Dethatching | CBSE | 6 | 52 | 1 |
| | (iii) | (B) Watering | CBSE | 7 | 57 | 1 |
| | (iv) | (A) Leaf cutting | CBSE | 7 | 60 | 1 |

| | | | | | | | |
|----|-------|-----|--------------------------|------|----|-----|---|
| | (v) | (A) | a relaxed atmosphere | CBSE | 7 | 55 | 1 |
| | (vi) | (B) | <i>Tagetes erecta</i> | CBSE | 8 | 87 | 1 |
| | (vii) | (B) | Mycoplasma | CBSE | 8 | 102 | 1 |
| 4. | (i) | (B) | Carnation | CBSE | 9 | 118 | 1 |
| | (ii) | (C) | Fusarium | CBSE | 9 | 118 | 1 |
| | (iii) | (C) | Capital intensity | CBSE | 9 | 118 | 1 |
| | (iv) | (B) | European | CBSE | 10 | 135 | 1 |
| | (v) | (C) | Humectants | CBSE | 11 | 146 | 1 |
| | (vi) | (C) | Freeze drying | CBSE | 11 | 145 | 1 |
| 5. | (i) | (A) | Floral preservatives | CBSE | 12 | 156 | 1 |
| | (ii) | (B) | 4°C | CBSE | 12 | 159 | 1 |
| | (iii) | (C) | Rose | CBSE | 12 | 159 | 1 |
| | (iv) | (D) | Hedge | CBSE | 4 | 35 | 1 |
| | (v) | (A) | 1 – 4 | CBSE | 8 | 71 | 1 |
| | (vi) | (A) | CAD | CBSE | 5 | 41 | 1 |
| 6. | (i) | (B) | IARI, New Delhi | CBSE | 1 | 9 | 1 |
| | (ii) | (D) | Tuticorin | CBSE | 11 | 142 | 1 |
| | (iii) | (C) | Manmade enrichment items | CBSE | 3 | 30 | 1 |
| | (iv) | (D) | Sunken garden | CBSE | 4 | 38 | 1 |
| | (v) | (B) | Termites | CBSE | 6 | 53 | 1 |
| | (vi) | (A) | Netherlands | CBSE | 11 | 141 | 1 |

SECTION B

SUBJECTIVE TYPE QUESTIONS

7. MINTS : Set of simple rules that helps to capitalize words correctly.
M : Months, I : I, N : Names, T : Titles and S : Starting letter of sentence
[NCERT, Employability, 9]

8. Any two [NCERT, Employability, 64]
(1) Libre Office Impress
(2) Microsoft Office PowerPoint
(3) Open Office Impress
(4) Google slides
(5) Apple keynote
9. Startups [NCERT, Employability, 89]
A startup is a company that is in the first stage of its operations, started with minimum investment.
10. Self-control [NCERT, Employability, 23]
The ability to control one's emotions, thoughts and behaviour effectively in different situations.
11. Green jobs in agriculture [NCERT, Employability, 114,116]

Organic farming, water quality testing, water conservation, water management
12. Functions of family area [CBSE / 3 / 27 / 2]
(a) Screening neighbours from viewing and learning
(b) Screening from wind and shading from Sun
(c) Providing comfort to the family members
(d) Entertaining personnel guests
13. Edges refers to low growing herbaceous perennials meant for lining and demarcation of the boundary. [CBSE / 4 / 36 / 2]
Foliage plant : Alternanthera spp Eupatorium cannabinum.
Flower plant : Zephyranthes, Amaryllis.
14. Plugging is the process of using small pieces of sod transplanted in the soil at intermittent intervals. [CBSE / 6 / 50 / 2]
15. Ikebana is Japanese art form, symbolises the unity of nature and humanity. It emphasised not on mass arrangement of flowers but on the individuality of the flower, foliage and branches. [CBSE / 10 / 123 / 2]

16. Humectants are hygroscopic chemicals, which help to maintain suppleness of dried plant materials by attracting water vapour from the surrounding areas. [CBSE/11/146/2]
17. (a) Commercial floriculture : is a branch of Horticulture which deals with commercial growing, marketing, and arranging flowers and ornamental plants, which includes annuals, biennials and perennials viz, trees, shrubs, climbers and herbaceous perennials. [CBSE/1/1/3]
- (b) Hi-tech floriculture : is the technology which is ultra modern, less environment dependent and capital intensive having improved productivity with quality produce.
18. Directly associated components of commercial floriculture : [CBSE/2/17/3]
- (i) Florist trade
 - (ii) Plant and bedding plant nursery
 - (iii) Planting material production
 - (iv) Seed production
 - (v) Flower perfumery
 - (vi) Bonsai production
 - (vii) Flori-clinics and consultancy services
19. (a) First stage of planning / Need Analysis : [CBSE/3/26/3]
Is the compilation of an inventory of what should be accomplished by means of the landscaping and what the landscape will include, based on the preferences, requirements and life styles of the family members.
To facilitate the need analysis, property area is divided into three areas as given below.
- (i) Public area / Approach area / Front area
 - (ii) Family area / private living area
 - (iii) Service area / utility area
- (b) Second stage of planning : It is the inventory of all existing property items including the architecture of the proposal home building, plot size, landscape, various view points, soil characteristics, climate etc are prepared.
20. Qualities of root stocks of rose [CBSE/8/72/4]
- (i) It should produce fibrous root system.

- (ii) It can easily be propagated from cuttings.
- (iii) It should have vigorous growth habits be healthy, resistant to diseases and frost. Plants should have uniform growth.
- (iv) It should have a bark, thick enough to hold the bud firmly and provide sap to the budded plant.
- (v) It should be reasonably free from suckers.
- (vi) It should support the budded plant for a long time.
- (vii) It should withstand a wide range of soils and climatic conditions.

Commonly used rootstocks are : *Rosa bourboniana* (Edward Rose), *Rosa canina* (Dog Rose)

Rosa indica var *adorate* (for northern plains)

Rosa laxa, *Rosa manetti*, *Rosa multiflora*
(for outdoor roses and well suited for hills)

21. (i) High productivity per unit area [CBSE/9/109/4]
- (ii) Ensures the production of any plant at any place and throughout the year.
 - (iii) Off-season flower production
 - (iv) Blemish-free high quality product (flowers and planting materials)
 - (v) Easy to control insect-pests and diseases
 - (vi) Water requirement reduces upto 30 percent
 - (vii) Labour requirement is less
 - (viii) Earliness as well as reduced crop duration.

Management of high temperature :

- (a) using Naturally ventilated polyhouses with side (1.5 m) and top (1 m) ventilation
- (b) use of fan and pad system for cooling use of 50% intensity shade nets (12 to 4 pm) installed inside the polyhouses
- (c) use of toggers/misters during afternoon once/twice only in vegetative phase of flower crop
- (d) photo-selective shading points with less reduction of PAR allowing 69% light and are useful in late spring and summer 450 kg/ha in a ratio of 1 : 3 (paint : water)

22. Climate : [CBSE/6/49/4]

(A) Warm tropical and sub tropical climates : *Cynodon dactylon* :

Highly tolerant to cold and drought, does not tolerate shade, poor drainage and high soil acidity.

Selection No. 1

zoysia japonica (Korean grass)

zoysia matrella (Manilla grass)

zoysia tenuifolia (Korean Velvet grass)

good in shade, how every they are very slow to grow

(B) Warm humid region

Axonopus affinis

Eremochloa or picroides

Paspalum notatum and *stenotaphrum secundatum* used for erosion control.

Mowing and rowing in lawn

- (i) Mowing lawn first time : Lawn mower should not be used as newly established grass will be uprooted. The grass should trimmed with a help of sharp scythe or hedge shear initially. It should be cut at a height of 3 cm while mowing. Mowing should be done at an interval of 10 – 15 days, depending upon the season and grass species.
- (ii) Rolling : Method of correcting minor variations in the turf grass surface particularly those caused by pedestrian traffic.

23. Water drying : The flowers and foliage are kept in water and allowed to dry .It is suitable for flowers like *Hydragea*, corn flower, and fever flow.

→ First the lower leaves and flowers from the stem are stripped, then materials are kept in standing normal water with about 5 cm depth at room temperature. The material is kept undisturbed in a dry, well aerated room until both the holder and flowers are dried.

Freeze drying : The flowers are arranged in a specimen chamber, then frozen unto – 35°C. Any frozen ice crystals on the flowers are sublimed or vapourized with the application of heat. After transforming into condensation, the vapour is captured into a separate chamber as ice.

This method is expensive and yield high quality finished floral products.

24. Post-harvesting of *Gerbera*

- (a) Harvesting : Flowers are cut when the outer two rows of disc florets are perpendicular at the stalk.

Pride the stalk at 10 cm below the flower heard to allow the air to escape from the cavity.

- (b) Pre-cooling : Stored at 2 to 3°C with a relative humidity of 90 – 95°C as soon as possible after harvest to overcome the field heat.
- (c) Pulsing : The cut flowers must be immersed in a solution containing a preservatives viz., 1% commercial bleach/sodium hypochlorite for four hours at 14 – 15°C.
- (d) Storage : Flowers can be stored dry at a temperature at 2 – 5°C for 2 days. Flowers can be stored loose in deionised water for 4 – 7 days at 4°C. After storage the sterns should be cut once again and placed in water or preservative for 2 – 3 hours for rehydration.