

Marking Scheme
Strictly Confidential
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Senior Secondary School Examination, 2026 (XIIth)
SUBJECT NAME : HORTICULTURE (Q.P. CODE : 816/340)

General Instructions: -

1	The CBSE has decided to introduce On Screen Marking (OSM) for the evaluation of Class XII answer Book with the 2026 Examination.
2	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.
3	“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.”
4	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.
5	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.
6	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.
7	Evaluators will mark (✓) wherever answer is correct. For wrong answer CROSS 'X' be marked. Evaluators will not put right (✓) while evaluating which gives an impression that answer is correct and no marks are awarded. This is most common mistake which evaluators are committing.
8	If a question has parts, please award marks on the right-hand side for each part in the OSM Portal. Marks awarded for different parts of the question will be totaled up by the OSM System.
9	If a question does not have any parts, marks must be awarded in the left-hand margin in the OSM Portal. This may also be followed strictly.

10	If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out with a note “ Extra Question ”.
11	No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
12	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.
13	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.
14	Ensure that you do not make the following common types of errors committed by the Examiner in the past :- <ul style="list-style-type: none"> • 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.
15	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.
16	The Examiners should acquaint themselves with the guidelines given in the “ Guidelines for Spot Evaluation ” before starting the actual evaluation.
17	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.

MARKING SCHEME
HORTICULTURE (Subject Code-816)
(PAPER CODE : 340) (P3400816)

Q.No.	EXPECTED OUTCOMES/VALUE POINTS	Marks
	SECTION – A Objective Type Questions	
1.	Answer any 4 out of the given 6.	1x4=4
(i)	(C) Non responding (Unit - 1, Page No. 5)	1
(ii)	Motivation is derived from the word ‘motive’. It indicates a directing behaviour towards a certain goal. (Unit - 2, Page No. 24)	1
(iii)	(B) Timely (Unit - 2, Page No. 33)	1
(iv)	(C) Audacity (It is an audio editing software) (Unit - 3, Page No. 63)	1
(v)	A startup is a company that is in the first stage of its operations. (Unit - 4, Page No. 88)	1
(vi)	(D) Suggest way to reduce the amount of garbage collected. (Unit - 5, Page No. 122)	1
2.	Answer any 5 out of the given 7 questions.	1x5=5
(i)	Flowers are important to human life because (Key words) [A] Communication and Expression : <ul style="list-style-type: none"> • Celebration and Joy • Love and Romance • Sympathy and Comfort • Gratitude and Appreciation [B] Culture and Spiritual Significance : Flowers are deeply integrated into the cultural and spiritual traditions of societies worldwide. <ul style="list-style-type: none"> • Rituals and Ceremonies • Symbolism • Art and Literature [C] Commercial and Economic Value : <ul style="list-style-type: none"> • Floristry and Gifting • Cosmetics and Perfumery • Food and Beverage • Medicine (Any one sentence)	1
(ii)	Public (part of the home garden)	1
(iii)	It is developed and sold by Autodesk, Inc.	1
(iv)	Double pots are useful for indoor plants because they allow proper drainage while preventing water spillage, protecting surfaces from damage. They also make plants easier to move and add a decorative touch to interiors.	1
(v)	Tuberose	1

(vi)	An outdoor room is a designed space in a landscape that functions like a room inside a house. It is a defined area, often with a floor, walls (hedges or fences), and a ceiling (pergola or tree canopy), created for specific activities like dining, relaxing, or entertaining. Its purpose is to extend the home's living space into the outdoors.	1
(vii)	Proper post-harvest techniques in floriculture are essential because they (1) Prolong the vase life of flowers. (2) Maintain their quality and freshness. (3) Reduce losses during storage and transport. (4) Ensuring flowers reach the market in optimal condition. (Any one)	1
3.	Answer any 6 out of the given 7 questions.	1x6=6
(i)	Advantages of a Lawn (Any one) 1. Enhances beauty and aesthetics. 2. Reduces heat and improves air quality. 3. Prevents soil erosion. 4. Helps cool the environment. 5. Provides space for recreation and relaxation. 6. Promotes mental well-being and reduces stress. 7. Calming backdrop for other garden elements. 8. Significantly enhances a property's value.	1
(ii)	Pot-porris is the most important dried floral arrangement throughout the world.	1
(iii)	Home landscaping offers several key environmental benefits : → Improves Air Quality : Plants filter pollutants and release oxygen. → Cools the Environment : Trees provide shade and reduce the “urban heat island” effect. → Manages soil erosion and reducing runoff. → Supports Biodiversity : Landscaping creates habitats for pollinators and wildlife. → Reduces Noise Pollution : Dense foliage acts as a natural sound barrier. (Any one)	1
(iv)	Biological factors affecting indoor plant growth : Plant species, genetic traits, and soil microorganisms influence growth, while pests, diseases, and competition with other plants can hinder it. (Any two)	1
(v)	Protected cultivation is the technique of providing favourable environmental or growth conditions to the plants. In greenhouses, the growing environment is altered to suit the specific requirements of plants. It is rather used to protect plants from the adverse climatic conditions by providing optimum conditions of light, temperature, humidity, CO ₂ and air circulation for the best growth of plants to achieve maximum yield and best quality.	1
(vi)	De-shooting is done in chrysanthemum in protected cultivation to improve flower quality and size by concentrating the plant's energy on fewer, more desirable shoots. By removing side shoots, growers can control the number of blooms per stem, which leads to larger, more uniform flowers.	1

(vii)	Ill effects of harvesting flowers at an over-mature stage : 1. Shorter Vase Life 2. Reduced Quality 3. Impaired Water Uptake 4. Increased Ethylene Sensitivity 5. Poor Transportability 6. Lower Market Value (Any one)	1
4.	Answer any 5 out of the given 6 questions.	1x5=5
(i)	This type of arrangements is created by combining both Western and Japanese flower arrangements. The blending of both the Japanese and Western should be in right proportion so as to make the design in more presentable form. This is based on the creativity of the designer.	1
(ii)	Floriculture	1
(iii)	A bird bath is an artificial basin filled with water, placed outdoors for birds to drink and bathe. It provides a vital water source for wildlife, especially in dry climates, and is a simple way for people to attract and observe a variety of bird species in their garden.	1
(iv)	Turfing is the fastest method to develop lawn.	1
(v)	To improve drainage and ensure proper aeration.	1
(vi)	Corms	1
5.	Answer any 5 out of the given 6 questions.	1x5=5
(i)	Three	1
(ii)	(1) French marigold (2) African marigold	1
(iii)	Love	1
(iv)	This arrangement is basically a Japanese art form, developed and mostly practiced in Japan and is known as Ikebana. This type of arrangement not emphasised on mass arrangement of flowers but on the individuality of the flower, foliage and branches.	1
(v)	Orchidaceae.	1
(vi)	Florists and decorators often prefer dried flowers because they last much longer, require less maintenance, and retain their shape and color for decorative purposes, making them ideal for arrangements and crafts.	1
6.	Answer any 5 out of the given 6 questions.	1x5=5
(i)	Yes	1
(ii)	mid-October to mid-November	1
(iii)	A roof in an outdoor room can be a pergola, gazebo, canopy, shade sail, umbrella, or a trellis with climbing plants.	1
(iv)	Hedges refer to row planting of shrubs or dwarf trees at regular intervals so that it forms a fence or acts as a boundary. Sometimes hedges also include palms, cacti and succulents, etc.	1
(v)	Morimono is a floral art form that combines flowers with fruits, vegetables, or natural objects , emphasizing harmony, seasonal themes, and decorative display.	1
(vi)	India ranks 14th globally in floriculture exports, contributing approximately 0.6% to the worldwide floriculture trade. In terms of production, India is the second-largest flower-growing country after China.	1

	SECTION – B Subjective Type Questions	
	Answer any 3 out of given 5 questions.	2x3=6
7.	<p>There are two types of objects :</p> <ul style="list-style-type: none"> • Direct – Direct objects are the ones directly ‘acted on’ by the verb. • Indirect – It answer the questions such as ‘to whom’ and ‘for whom’. <p>(Unit - 1, Page No. 17)</p>	(1+1=2)
8.	<p>There are some of the ways to manage stress (any four) :</p> <ul style="list-style-type: none"> (i) Talk to friends and family for comfort. (ii) Practice meditation and yoga. (iii) Keep your thoughts in present. (iv) Maintain an accomplishment sheet and enter small achievements. (v) Stay positive and analyse situation. (vi) Whenever you feel negative take a look at your accomplishment sheet. <p>(Unit - 2, Page No. 26)</p>	(½ x 4=2)
9.	<ul style="list-style-type: none"> (i) Click on ‘Insert’ from menu. (ii) Select ‘Image’. (iii) An Insert Image dialog box appears browse through folders and Select Image. (iv) Click on ‘Open’. <p>(Unit - 3, Page No. 75)</p>	2
10.	<p>There are many types of Entrepreneurs which include the following :</p> <ul style="list-style-type: none"> (i) Service Entrepreneurs - They create a new market or provide service in an existing market. (ii) IT Entrepreneurs - They take up entrepreneurship in the field of Information Technology (IT). (iii) Agricultural Entrepreneurs – Agriculturists, who introduced new and innovative technology to maximise the yield. (iv) Women Entrepreneurs – Women who take up entrepreneurship. (any other related to it) <p>(Unit - 4, Page No. 82)</p>	(½ x 4=2)
11.	<p>The four benefits of green jobs are :</p> <ul style="list-style-type: none"> (i) Reduction in greenhouse gas emission. (ii) Controlled waste and pollution. (iii) Protection and restoration of eco-systems. (iv) Solves the drastic effects of climate change. (v) Increase in efficiency of energy and raw materials. <p>(Unit - 5, Page No. 114)</p>	(½ x 4=2)
	Answer any 3 out of given 5 questions in 20-30 words each.	2x3=6
12.	<p>Difference between formal and informal edges :</p> <ul style="list-style-type: none"> • Formal edges are made of non-living materials like stones, tiles, bricks, or concrete, giving a structured and neat appearance. • Informal edges are created using living plants, such as grass verges or stone paths with prostrate plants, giving a natural and relaxed look. 	2

13.	Two types of educational institutions in India offering floriculture courses are : 1. Agricultural Universities/Colleges – All State and Central Agricultural Universities, as well as private agricultural colleges, offer B.Sc. (Agriculture/Horticulture) courses with floriculture as a subject at the graduate level. 2. Deemed Universities – Institutions like IARI, New Delhi offer specialized M.Sc. and Ph.D. programmes in Floriculture and Landscaping, with IARI being the first deemed university in India to start a Ph.D. in Floriculture. 3. State Horticulture/Floriculture Departments and CPWD – Provides specialized training to gardeners in practical aspects of floriculture and landscaping.			2
14.	Feature	Western Style	Ikebana (Eastern Style)	2
	Philosophy	A decorative art focused on beauty and abundance.	A meditative practice symbolizing the connection between nature and humanity.	
	Form	Symmetrical and full, often in circular or oval shapes, hiding stems.	Asymmetrical and minimalistic, with a focus on line, form, and negative space.	
	Materials	Primarily focuses on flowers with some foliage as filler.	Uses a wide range of natural materials, including branches, leaves, and grasses, with their stems often visible.	
	(Any two)			
15.	(a) Cold storage : Flowers are most perishable commodity, thus these should be stored at the recommended temperature in the cold storage. The cold storage built at the production centres and whole sale markets will be of great utility. The persons can keep the flowers in cold storage on rent basis for earning their livelihood and higher returns to the growers. (b) Horticultural inputs : For growing quality flowers different types of inputs like soil-less growing media, fertilizers, fungicides, insecticides, implements, etc. are required by the growers. Thus, some persons can earn their livelihood by selling such types of horticultural inputs.			2
16.	Important factors for selecting a site for lawn establishment (Any two) <ul style="list-style-type: none">• Sunlight – Area should receive 4-6 hours of direct sunlight daily.• Soil – Well-drained, fertile, loamy soil with good aeration.• Topography – Level or gently sloping land to prevent erosion/waterlogging.• Water availability – Easy access to irrigation for regular watering.• Accessibility & use – Should be convenient to maintain and suitable for intended use (recreation/ornamental).			2
	Answer any 2 out of the given 3 questions in 30-50 words each.			3x2=6
17.	(a) Enrichment items are the elements of the outdoor room which are not essential for making walls, ceiling or floor but, make the place more useable. (b) Natural tangible enrichment items seen in outdoor room : Stones, specimen plants, water, animals, birds, etc. (c) Intangible enrichment items outdoor room : Fragrance, sound of waterfall, view of natural scenery and sound of pods or foliage when gentle wind blows.			3

18.	Beneficiaries of CAD in landscaping. (Any three) (a) Landscape designers, architects and planners (b) Landscape engineers (c) Floriculturists (d) Professionals (e) Amateur gardeners (f) Students (g) Costumers (h) Industries			3
19.	Flower	Primary Postharvest Problem	Explanation	3
	Carnation	Ethylene Sensitivity	Carnations are highly sensitive to ethylene, a natural plant hormone. Exposure to even small amounts of ethylene gas can cause rapid petal wilting, in-rolling, or “sleepiness,” significantly shortening their vase life. Sources of ethylene include ripening fruits and vegetables, and vehicle exhaust fumes.	
	Gerbera	Stem Bending (Bent Neck)	The primary issue with Gerbera is a sudden bending or “snapping” of the stem just below the flower head. This is often caused by vascular blockage from bacteria in the vase water, which prevents adequate water uptake. This leads to the stem losing turgidity and the flower head becoming too heavy to support.	
	Gladiolus	Improper Florets Opening	Gladiolus, a spike flower, is prone to postharvest problems related to the sequential opening of its florets. The main issue is that the lower florets may wilt and die prematurely, while the upper florets fail to open, resulting in an incomplete and unsightly spike. This is often due to water stress and a lack of carbohydrates.	
Answer any 3 out of given 5 questions in 50-80 words each.				4x3=12
20.	(a) CAD streamlines landscape design by allowing for the creation of precise, scaled plans and realistic 3D visualizations . It increases efficiency by enabling quick modifications, and automates tasks like generating material lists, leading to more accurate and professional results. (b) CAD software which school can use for redesigning their school garden (Any two) 1. AutoCAD 2. ArchiCAD 3. Advance Design 4. Advance Steel 5. Advance Concrete 6. BricsCAD 7. SketchUp 8. Vectorworks Landmark 9. Revit (for BIM-based landscape design) 10. Land F/X (AutoCAD plugin specialized for landscape) 11. Lumion/Twinmotion (for visualization and rendering) 12. BRL-CAD			2+2

21.	<p>Various factors which support floriculture in India :</p> <ul style="list-style-type: none"> • India is endowed with diverse agro-climatic conditions congenial for growing of a variety of flower crops throughout the year • Fertile soil • Abundant water and sunlight • Readily available low cost labour • Liberalized Seed and EXIM policy • Adequate support from financial institutions • Increase in per capita income specially the disposable income • Change in rural-urban population ratio • Higher population growth rate in cities • Development of hotel and tourism industry • Use of flowers is being considered as an important parameter for high social values • Establishment of National Registration Center for Roses at IARI New Delhi and International Registration Authority for Bougainvillea at IARI New Delhi. 	4
22.	<p>(a) Proper watering is vital for indoor plants, as both overwatering and underwatering can cause serious damage or death. It ensures healthy growth, supports flowering, and prevents issues like wilting, root rot, and nutrient imbalance.</p> <p>(b) Factors which influence the frequency of watering indoor plants (Description on any two)</p> <ul style="list-style-type: none"> (i) Plant type (leaf size, root system, succulent vs. non-succulent). (ii) Light, temperature, and humidity conditions. (iii) Growth stage (flowering or rapid growth needs more water). (iv) Size of plant in relation to pot size. (v) Type of soil mix (heavy vs. porous media). (vi) Type of container (clay, plastic, glazed ceramic). 	2+2
23.	<p>(a) A private outdoor room is a dedicated, secluded space designed to provide a sense of retreat and personal sanctuary away from public view. Its purpose is to extend the living area of a home into the garden, offering a place for quiet recreation, relaxation, or private gatherings. Privacy is ensured through the use of vertical barriers like solid fences, privacy screens, or walls. It can also be achieved with strategic planting of tall hedges, trees, or climbing vines on trellises, which create a natural, living wall.</p> <p>(b) Plants enhance private and family areas in landscaping by creating a sense of privacy and comfort. They provide visual and sound barriers through hedges and trees, ensuring privacy. Additionally, plants offer a multi-sensory experience with their colors, textures, and fragrances, which can reduce stress and improve well-being.</p>	2+2

24.	List of common drying methods for flowers (Explanation of any one method) 1. Air drying (hang drying) 2. Sun drying 3. Press drying 4. Embedded drying (using desiccants like silica gel, sand, or borax) 5. Oven drying 6. Microwave oven drying 7. Drying in water Polymer preservation 8. Freeze drying 9. Humectants preservation 10. Dehydration by bleaching and sulfuring 11. Vacuum drying	2+2
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