

# CBSE | DEPARTMENT OF SKILL EDUCATION

## HORTICULTURE (SUBJECT CODE –816)

### Marking Scheme for Sample Question Paper Class XII (Session 2020-2021)

Max. Time: 3 Hours

Max. Marks: 60

#### General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **24 questions** in two sections – Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (6 + 18 =) 24 questions, a candidate has to answer (6 + 11 =) 17 questions in the allotted (maximum) time of 3 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (30 MARKS):**
  - i. This section has 06 questions.
  - ii. There is no negative marking.
  - iii. Do as per the instructions given.
  - iv. Marks allotted are mentioned against each question/part.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (30 MARKS):**
  - i. This section contains 18 questions.
  - ii. A candidate has to do 11 questions.
  - iii. Do as per the instructions given.
  - iv. Marks allotted are mentioned against each question/part.

## **SECTION A: OBJECTIVE TYPE QUESTIONS**

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| <b>Q. 1</b> | <b>Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)</b>   |          |
| i.          | Verbal and Non-verbal  | <b>1</b> |
| ii.         | Music, book, activities, expansive thoughts, living in the present<br><b>Student can write any 2</b>                                 | <b>1</b> |
| iii.        | CTRL+ C and CTRL + V   | <b>1</b> |
| iv.         | Adaptability, Decisiveness, Initiative, Self-Confidence, Organizational Skills, Critical thinking.<br><b>Student can write any 2</b> | <b>1</b> |
| v.          | Construction worker, landscape architect, Green Building expert, Rain water harvesting expert. Building Planner                      | <b>1</b> |
| vi.         | Recycling is the action or process of converting waste into reusable material.   | <b>1</b> |

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| <b>Q. 2</b> | <b>Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)</b> |          |
| i           | A. Rose  | <b>1</b> |
| ii          | B. Dibbling  | <b>1</b> |
| iii         | D. All of these  | <b>1</b> |
| iv          | C. Rose  | <b>1</b> |
| v           | C. Computer Aided Design   | <b>1</b> |
| vi          | C. Pusa Arpita   | <b>1</b> |
| vii.        | A. <i>Dieffenbachia</i>  |          |

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| <b>Q. 3</b> | <b>Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)</b> |          |
| i.          | D. All of these  | <b>1</b> |
| ii.         | C. Both A and B  | <b>1</b> |
| iii.        | D. All of these  | <b>1</b> |
| iv.         | D. Morimono  | <b>1</b> |
| v.          | C. <i>Gladiolus</i>  | <b>1</b> |
| vi.         | A. The Netherlands   | <b>1</b> |
| vii.        | B. Oleaceae  |          |

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| <b>Q. 4</b> | <b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b> |          |
| i.          | A. 15-21 °C  | <b>1</b> |
| ii.         | D. <i>Cestrum nocturnum</i>  | <b>1</b> |
| iii.        | A. <i>Scindapsus aureus</i>  | <b>1</b> |
| iv.         | D. Marigold  | <b>1</b> |
| v.          | A. <i>Cyperus rotundus</i>   | <b>1</b> |
| vi.         | B. Pre cooling   | <b>1</b> |

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| <b>Q. 5</b> | <b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b> |          |
| i.          | B. Carnation   | <b>1</b> |
| ii.         | C. <i>Alternanthera</i> spp  | <b>1</b> |

|      |                   |   |
|------|-------------------|---|
| iii. | D. 75             | 1 |
| iv.  | B. Tuberosa       | 1 |
| v.   | D. All of these   | 1 |
| vi.  | B. English garden | 1 |

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| <b>Q. 6</b> | <b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b> |   |
| i.          | B. Short day   | 1 |
| ii.         | D. 1/3   | 1 |
| iii.        | D. Ethylene  | 1 |
| iv.         | D. All of these  | 1 |
| v.          | A. Florist   | 1 |
| vi.         | D. Both B and C  | 1 |

## **SECTION B: SUBJECTIVE TYPE QUESTIONS**

**Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)**

**Answer each question in 20 – 30 words.**

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| <b>Q. 7</b>  | Writings Skill is a form of communication that allows students to put their feelings and ideas on paper, to organize their knowledge and beliefs into convincing arguments.   | <b>2</b> |
| <b>Q. 8</b>  | Books are said to be best friends. They expand our horizon of thinking. They help us visualize the unknown and uncharted territories beyond our capacities.   | <b>2</b> |
| <b>Q. 9</b>  | A <b>presentation</b> is a systematic display of information. It consists of a number of slides containing text, graphics, movies, sound, and graphs. Slides of a presentation are displayed one by one on the screen.              | <b>2</b> |
| <b>Q. 10</b> | Interpersonal skills are critical for any business owner or entrepreneur to possess because the job involves communicating, interacting and selling to customers.   | <b>2</b> |
| <b>Q. 11</b> | Reuse, Reduce, Recycle, use less heat and reconditioning, replace your light bulbs, drive less drive smart, Buy energy efficient products, Use less hot water, Use the off buttons, Plant a tree.<br><b>Student can write any 2</b> | <b>2</b> |

**Answer any 3 out of the given 5 questions in 20 – 30 words each (2 x 3 = 6 marks)**

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| <b>Q. 12</b> | <b>Bonsai</b><br>Bonsai is an art, which expresses in miniature the beauty of natural tree forms. The word 'Bonsai' is comprised of two words 'Bon' means a tray or shallow container and 'sai' means to grow; thus bonsai means something growing in a shallow container or tree in a pot. | <b>2</b> |
| <b>Q. 13</b> | <b>Terrarium culture</b><br>It is a sophisticated technique of growing ornamental plants inside transparent glass containers in manner to make it a complete ecosystem.   | <b>2</b> |
| <b>Q. 14</b> | <b>Role of mowing in lawn grasses</b> <ul style="list-style-type: none"> <li>• It stimulates bud development.</li> <li>• Shoots become thicker and roots shorter.</li> <li>• Helps in maintaining its attractiveness for maximum utility.</li> </ul>  | <b>2</b> |

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| <b>Q. 15</b> | <p><b>Floral preservatives</b></p> <p>Floral preservatives refers to any substance which is capable of inhibiting, retarding or arresting the growth of microorganism thus helps in improving post harvest life and quality of flowers. They mainly comprised of sugars, germicides, ethylene inhibitors, growth regulators and some mineral salts.</p>  | <b>2</b> |
| <b>Q. 16</b> | <p><b>Potpourris</b></p> <p>It is a special dried floral arrangement, a mixture of sweet smelling leaves, spices, seeds, roots and distilled essential oils which is filled in pillows or sachets. The important plants used for making potpourris are rose, lilac, lavender, pinks, hyacinths, lilies, violets, etc. and others associated with perfume namely geranium, daisy bush, bergamot, sage, savoury, thyme etc. In addition, ferns, pinecones, lily pods and driftwood and other items collected from forests and gardens can also be added.</p> | <b>2</b> |

**Answer any 2 out of the given 3 questions in 30– 50 words each (3 x 2 = 6 marks)**

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| <b>Q. 17</b> | <p><b>Importance of CAD in landscaping</b></p> <p>CAD is a software system that is capable of transforming raw data into plans drawings and models to enable effective planning and management.</p> <p><b>Importance</b></p> <ul style="list-style-type: none"> <li>• Areas and distances can be determined for planning and maintenance.</li> <li>• Exact locations of all items can be recorded for future reference.</li> <li>• Contour plans can be illustrated for drainage works.</li> <li>• Earthworks of cut and fill can be made.</li> <li>• Costs for soil volumes can be calculated for a range of variables (from different suppliers and different grades of raw products).</li> <li>• 3D models are created to illustrate the concept and to show interaction of light, shade, plant growth, future development.</li> <li>• CAD plans can be entered into software that automatically operate earthmoving machines that can level the site as specified on the plans</li> <li>• Information can be transferred by email.</li> </ul> | <b>3</b> |
| <b>Q. 18</b> | <p><b>Floriculture as an employment generation sector</b></p> <ul style="list-style-type: none"> <li>• Traditional flower cultivation</li> <li>• Cut flower cultivation</li> <li>• Nursery industry</li> <li>• Plant rental services</li> <li>• Hybrid seed production business</li> <li>• Turf industry</li> <li>• Florist and floral decorations</li> <li>• Value added products based industries</li> </ul>  | <b>3</b> |

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| <b>Q. 19</b> | <b>Type of pinching in carnation</b><br>Depending upon the need of crop spread, single, one and a half and double pinch method is adopted. Ideal time for pinching is early morning. When the plant attains 5 nodes, the first pinch is given. This is called 'single pinch'. This would give rise to six lateral shoots. With a 'one and half pinch', 2-3 of these lateral shoots are pinched again. For the 'double pinch', all the lateral shoots are pinched off. | <b>3</b> |
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**Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)**

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| <b>Q. 20</b> | <b>Climate:</b> Cut chrysanthemums are grown under polyhouses with the following environmental conditions.<br>Temperature : 16 - 25°C<br>Relative humidity : 70 - 85 %<br>CO <sub>2</sub> : 600 - 900 ppm<br>Photoperiod : Long day conditions with 13 hours light & 11 hours darkness during vegetative stage (upto 4-5 weeks from planting) and short day conditions with 10 hours light & 14 hours darkness during flower bud initiation stage.<br><b>Soil:</b> Well drained sandy loam soil with good texture and aeration or growing medium made of 1: 1: 2 of soil, compost and cocopeat with pH of 5.5 to 6.5.<br><b>Varieties:</b><br><b>Standard types:</b> Bonfire Orange, Bonfire Yellow<br><b>Spray types:</b> Reagan Yellow, Reagan White, Nanako<br><b>Insect pests:</b> Leaf miner, Thrips, Aphids, Red spider mite<br><b>Diseases :</b> Leaf spot, White Rust, Wilt, Powdery mildew  | <b>4</b> |
| <b>Q. 21</b> | There are 3-4 general methods of storage of flowers<br>1. <b>Refrigerated storage:</b> Most widely used method of storage of cut flowers. There are two types (a) Wet storage and (b) dry storage.<br>(a) <b>Wet storage:</b> Flowers stored with their bases dipped in water or preservative solution, Good for short duration, day to day handling. Stored at temperature of 2-4°C.<br>(b) <b>Dry storage:</b> Flowers are sealed in plastic bags to prevent loss of moisture. More laborious but hold the flowers for longer duration. Storage at 0-1°C is ideal for temperate flowers (Roses, carnation, chrysanthemum) but tropical flowers like anthurium, cattleya, heliconia etc. storage is done at 7-15°C and for sub-tropical flowers like gladiolus, jasmine, proteas etc. storage is done at 4-7° C.<br>2. <b>Controlled atmosphere storage (CA):</b> Low temperature storage in gas tight chambers under decreased levels of oxygen (O <sub>2</sub> ) and increased levels of carbon dioxide (CO <sub>2</sub> ). CO <sub>2</sub> levels higher than 4% and O <sub>2</sub> level lower than 0.4 per cent causes injury and anaerobic conditions respectively.<br>3. <b>Modified Atmosphere storage (MA):</b> Less precise form of CA storage, the dry storage of flowers in sealed bags leads to reduction in O <sub>2</sub> and increase in CO <sub>2</sub> levels due to respiration of the tissue. Buildup of very high level of CO <sub>2</sub> may cause damage to flowers.<br>4. <b>Hypobaric or Low pressure storage (LPS):</b> Storage at low atmosphere pressure under refrigerated conditions, continuous ventilation and high relative humidity. Rapid loss of water from tissues is major disadvantage and cost of installation is also high. | <b>4</b> |

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| Q. 22 | <p><b>Hedge:</b> Shrubs or trees planted at regular intervals to form a continuous screen is called as hedge.</p> <p><b>Edges:</b> Evergreen, low growing plants having same characteristics as for planting a hedge are grown to form an edge.</p> <p><b>Carpet bedding:</b> It refers to covering an area, preferably a bed or a series of beds with dense low growing herbaceous plants according to a set design.</p> <p><b>Garden adornments:</b> Statues, garden seats, ornamental vases, sun dials, bird baths, floral clock, fountains, etc.</p>   | 4 |
| Q. 23 | <p><b>Irrigation:</b> Lawn grasses are shallow-rooted; therefore, require frequent light irrigation. Use of sprinkler irrigation can save water and number of man-days (labour) to a considerable extent. In summers watering is done at two days interval while in winters irrigation frequency is reduced to once a week.</p> <p><b>Mowing:</b> Lawn grass should be allowed to grow 5-6 cm during any season. In a single mowing, only 33-40% of the clippings should be removed.</p> <p><b>Fertilization:</b> Broadcasting a fertilizer (NPK) mixture at the rate of 50-60 g/m<sup>2</sup> during Feb-March and August- September is necessary for a lush green lawn. Spraying of Urea at 0.3% is also beneficial</p> <p><b>Dethatching:</b> The process of removing a layer of dead and decaying organic debris and the living roots, crown, and stems of the lawn grass (thatch) from the top layer is known as dethatching.</p> <p><b>Liming:</b> Growth of moss over the lawn area is an indication of acidic soil, which means the soil requires liming. Under such condition, powdered chalk or lime should be applied at the rate of 250 gm per m<sup>2</sup> area.</p> | 4 |
| Q. 24 | <p><b>Climate:</b> Subtropical and temperate climatic conditions are suitable. The crop performs well under a temperature range of 27 - 30°C.</p> <p><b>Soil:</b> Well drained sandy loam soil rich in organic matter with pH of 6 to 7.</p> <p><b>Varieties:</b> White Prosperity, Priscilla, Jackson Ville Gold, Archana, Aarti, Arka Kesar, Darshan, Dhiraj, Agnirekha, Archana, Bindiya, Shree Ganesh.</p> <p><b>Insect-Pest:</b> Thrips, Semi looper and Helicoverpa</p> <p><b>Diseases:</b> Leaf spot, Fusarium wilt, blight</p>   | 4 |