

# **COVER PAGE**

## **BASIC HORTICULTURE (762)**

### **Marking Scheme**

### **Class XII - 2018-19**

**Time: 3Hours**

**Total Marks: 60**

**General Instructions:**

1. *Marking Scheme is divided into two sections: Section-A and Section- B.*
2. **Section–A:**
  - i. *Multiple choice question/Fill in the blanks/Direct Questions of 1 mark each. Answer any 10 questions out of the given 12 questions.*
  - ii. *Very Short Answer of 2 marks each. Answer any 5 questions from the given 7 questions.*
  - iii. *Short Answer of 3 marks each. Answer any 5 questions from the given 7 questions.*
3. **Section–B:***Long/Essay type questions of 5 marks each. Answer any 5 questions from the given 7 questions.*
4. *All questions of a particular section must be attempted in the correct order.*
5. *Please check that this question paper contains 33 questions out of which 25 questions are to be attempted.*
6. *The maximum time allowed is 3 hrs.*
7. *The marking scheme carries only suggested value points for the answers. These are only guidelines and do not constitute the complete answers. The students can have their own expression and if the expression is correct, the marks be awarded accordingly.*

## BASIC HORTICULTURE (762)

### Marking Scheme

Class -XII, 2018-19

Time Duration: 3 Hours

Max Marks: 60

#### Section A

Do as directed ( 1-12, one marks each), Attempt any 10 questions

10 x 1 = 10

Q. No.1

1. goottee
2. Lycopene
3. One seeded
4. Pickling
5. T budding
6. Weed
7. Doob
8. Cloves
9. Transparent
10. Rose
11. *Phalaris minor*
12. Carbon dioxide

Very short answer type questions ( 13-19, 2 marks each). Attempt any five questions

5 x 2 = 10

Q. No. 13-19

13. Potassium metabisulphite and Sodium Benzoate.
14. Preserve and candy
15. Urban peri-urban horticulture : Growing of horticultural crops in towns and cities is called as urban horticulture whereas growing of horticultural crops on the periphery of towns and cities is called as peri-urban horticulture.

	<p>16. <i>Lycopersicon esculentum</i>.</p> <p>17. Side veneer grafting, epicotyl grafting and soft wood grafting</p> <p>18. Aonla and guava.</p> <p>19. Cabbage, cauliflower, broccoli, knol khol.</p>
<p><b>Short answer type questions (20-26, 3 marks each). Attempt any five questions</b> <span style="float: right;"><b>5 x 3 = 15</b></span></p>	
<p>Q. No. 20-26</p>	<p>20. Spinach, amaranth, palak, methi etc.</p> <p>21. Avenue tree – <i>Cassia fistula</i> (Amaltas), <i>Erithrina indica</i> (Coral tree), <i>Delonix regia</i> (gulmohar) etc. Two bushes – <i>Lawsonia indica</i>, lavender, Camellia, rose etc..</p> <p>22. Jawahar, Mrinalini, Banjaran, Kiss of Fire, Dr B P Pal, Raktagandha, Raja Surender Singh of Nalagarh, Tata Centenary, Priyadarshini, (HT), Himangini, Prema, Sadabahar, Kiran, Chandrama etc.</p> <p>23. Doob ( <i>Cynodon dactylon</i>), Kentucky bluegrass (<i>Poa pratensis</i>), Zoysia, Tall fescue etc.</p> <p>24. Preservation by salt, preservation by sugar, preservation by heat, preservation by low temperature, preservation by acids, preservation by antibiotics etc.</p> <p>25. Gulkand, rose water, rose oil, gulroghan, concrete etc.</p> <p>26. Leaf spot, dieback, wilt, damping off of seedlings, botrytis rot.</p>
<p><b>Section B. Long answer type questions (27-33, 5 marks each). Attempt any five questions</b> <span style="float: right;"><b>5 x 5 = 25</b></span></p>	
<p>Q. No. 27</p>	<p>Major business opportunities in horticulture are</p> <ul style="list-style-type: none"> <li>• Fruit cultivation.</li> <li>• Vegetable cultivation.</li> <li>• Hybrid seed production in vegetables and flowers</li> <li>• Cut flower production</li> <li>• Fruit plant nursery as microenterprise</li> <li>• Vegetable and ornamental plants nursery</li> <li>• Hi-tech flower and vegetable nursery</li> <li>• Raising plants through micropropagation</li> <li>• Horticulture-based processing industry</li> <li>• Production of dry flowers</li> <li>• Business Sales Representative</li> </ul>

	<ul style="list-style-type: none"> <li>• Consultant</li> <li>• Marketing manager of horticultural produce</li> <li>• Ayurvedic medicines</li> <li>• Business of essential oils, flavours and fragrances</li> <li>• Lecturer/Assistant Professor/Training Associate</li> <li>• Government development departments</li> </ul>
<p>Q. No. 28</p>	<p><b>Crop nursery:</b> Raising of plants from seed in a specific/defined area before final establishment in the field.</p> <p><b>Reasons</b></p> <ul style="list-style-type: none"> <li>• To reduce mortality.</li> <li>• To reduce transplantation shock.</li> <li>• For better care</li> </ul> <p><b>Fruit plants</b> Papaya, jamun, phalsa, citrus rootstock , apple rootstock, mango rootstock etc.</p>
<p>Q. No. 29</p>	<p><b>UPH:</b> Growing of horticultural crops in towns and cities is called as urban horticulture whereas growing of horticultural crops on the periphery of towns and cities is called as peri-urban horticulture.</p> <p><b>Which one is better</b> In urban areas, horticultural activities are primarily restricted to kitchen gardening, landscape gardening, roof gardening, terrace gardening whereas in pre-urban localities, large scale cultivation of fruits, vegetables and flowers can be adopted. UPH is a highly profitable venture, which not only helps in increasing the food and nutritional security but creates employment opportunities to rural and urban youths, and makes our surroundings more attractive and beautiful.</p>
<p>Q. No. 30</p>	<p><b>Preservation:</b> Keeping the produce for future use is called as preservation.</p> <p>Different methods of preservation are:</p> <p><b>(I) Physical Approaches to Food Preservation</b></p> <p>a) <b>Asepsis and filtration</b> b) <b>Thermal Processing:</b></p> <p>Thermal processing used for preservation is usually classified as follows:</p> <p><b>i) Blanching:</b></p> <p><b>ii) Pasteurization:</b> <b>iii) Sterilization:</b></p> <p><b>c) Drying/Dehydration:.</b></p>

	<p><b>II) Chemical Preservation</b>                  - Use of chemical additives such as sugars, salt, acids, spices etc.</p> <p><b>a) High sugar preservation</b>  <b>b) Use of salt/acid/spices (Pickling)</b>  <b>c) Use of chemical additives:</b></p> <p><b>III) Biological Preservation (Fermentation)</b></p>										
<p>Q. No. 31</p>	<p><b>Kitchen gardening:</b> It is growing of fruits, vegetables or ornamentals on a piece of land near to your kitchen. Basically kitchen gardening is done for the consumption of your own family and not for commercial purposes. However, if there is availability of good land, for larger cultivation, one can use that piece of land for commercial production of horticultural crops. A well maintained kitchen garden can provide fruits, vegetables and flowers throughout the year. In kitchen garden, intensive system of planting is followed. On bunds, vegetables like carrot, radish, and in the fields cabbage, cauliflower, and <i>dhania</i> can be easily grown. Near the wall of house, some trailing type bean should be grown. Among fruits, choice is limited but strawberry, Amrapali mango, Kagzi Kalan lemon and papaya can be easily grown. Similarly one grapevine can be trained to wall of house. On side rows of kitchen garden, a row of roses, gladiolus or chrysanthemum or any other seasonal flowers can be grown to make kitchen garden more attractive and to meet the demands of your family.</p>										
<p>Q. No. 32</p>	<p><b>Syrup:</b> A solution of sugar in water is called a syrup and process of adding syrup in fruit product is called as syrumping. White, refined sucrose is used for making syrup.</p> <table border="1" data-bbox="305 1213 1373 1457"> <thead> <tr> <th>Sugar (kg)</th> <th>Syrup concentration (%)</th> </tr> </thead> <tbody> <tr> <td>0.250</td> <td>20</td> </tr> <tr> <td>0.428</td> <td>30</td> </tr> <tr> <td>0.500</td> <td>40</td> </tr> <tr> <td>1.000</td> <td>50</td> </tr> </tbody> </table> <p><b>Syrup temperature : 79 to 82°C</b></p>	Sugar (kg)	Syrup concentration (%)	0.250	20	0.428	30	0.500	40	1.000	50
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<p>Q. No. 33</p>	<p><b>Weed:</b> Any plant growing out of its proper place or where it is not wanted/ desired is called as a weed or weeds are the plants out of place in cultivated fields, lawns or orchards etc.</p> <p><b>Harmful effects of weeds</b></p> <ul style="list-style-type: none"> <li>• Weeds reduce the economic yield by competing with main crop for water, nutrition, light, space and air.</li> <li>• Weeds create difficulty while carrying out cultural practices in the field like</li> </ul>										

hoeing, irrigation and harvesting.

- Several weeds act as alternate hosts to many serious pests/ diseases. They may harbour insects-pests and act as secondary hosts for spread of several diseases.
- Some weeds are injurious to animal and human health. For example, Parthenium and Datura seeds are poisonous in nature and may cause allergy to human beings.

#### Names of weeds

Common name	Botanical name	Common name	Botanical name
Wild senji	<i>Melilotus parviflora</i>	Wild palak	<i>Rumex dentatus</i>
Maina	<i>Medicago denticulata</i>	Amarbel	<i>Cuscuta sp.</i>
Bathu	<i>Chenopodium album</i>	Kahi	<i>Saccharum spontaneum</i>
Chulai	<i>Amaranthus viridis</i>	Bhang	<i>Cannabis sativa</i>
Bhakhra	<i>Tribulus terrestris</i>	Khabbal grass	<i>Cynodon dactylon</i>
Puthkanda	<i>Achyranthus aspera</i>	Baru grass	<i>Sorghum halepense</i>
Dib (Dab)	<i>Typha latifolia</i>	Motha	<i>Cyperus rotundus</i>
Bhoorni aonla	<i>Phyllanthus niruri</i>	Parthenium or	<i>Parthenium hysterophorus</i>
Kana	<i>Saccharum munja</i>	Lantana	<i>Lantana camara</i>
Dhatoora	<i>Datura stramonium</i>	Jangli gobhi	<i>Launea nudicaulis</i>
		Jangli gajjar	<i>Daucus carota</i>
		Khat yay	<i>Portulaca sp.</i>