

# CBSE Class 12 Horticulture 2024 Solved Paper

## SECTION A

### (Objective Type Questions)

1. Answer any 4 questions out of the given 6 questions on Employability Skills. 4x1=4

(i) A person with conscientious personality is :

- (A) Unreliable
- **(B) Hardworking**
- (C) Lazy
- (D) Curious

(ii) Ability to make the optimum use of time, energy, and resources to achieve the desired goals is :

- (A) Decisiveness
- **(B) Organisational skills**
- (C) Interpersonal skills
- (D) Perseverance

(iii) Which one of the following is not a required step for active listening?

- (A) Eye contact
- **(B) Distracted**
- (C) Reflective feedback
- (D) Confirmation through gestures

(iv) Green jobs are the key to prevent the \_\_\_\_\_ of the natural environment.

- (A) Degradation
- **(B) Depletion**
- (C) Restoration
- (D) Beauty

(v) Individual pages of LibreOffice Impress are called \_\_\_\_\_.

- **(A) Slides**
- (B) Templates
- (C) Worksheets
- (D) Books

(vi) \_\_\_\_\_ is important in communication because it helps in knowing whether the receiver has understood the message or not.

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- (A) Receiver
- **(B) Feedback**
- (C) Sender
- (D) People

**2. Answer any 5 out of the given 7 questions. 5x1=5**

- **(i) Name the flower which is used to express the human feeling of 'departure'.**
  - **Ans:** Carnation
- **(ii) In an outdoor room, the floor is made of \_\_\_\_\_.**
  - **Ans:** Lawn or paved surface (like stone, tiles, or grass)
- **(iii) Define topiary.**
  - **Ans:** Topiary is the art of clipping or training live plants into clearly defined ornamental shapes like animals, birds, or geometric forms.
- **(iv) What should be the optimum relative humidity for indoor plants?**
  - **Ans:** 40% to 60%
- **(v) Which is the most popular and successful method for multiplying roses?**
  - **Ans:** Budding (specifically T-budding)
- **(vi) Write one tangible enrichment item of the outdoor room.**
  - **Ans:** Stone or sculpture
- **(vii) What is a pulsing solution?**
  - **Ans:** A pulsing solution is a concentrated solution of sugars and other chemicals used to improve the vase life of cut flowers by providing quick energy before storage or transport.

**3. Answer any 6 out of the given 7 questions. 6x1=6**

- **(i) Define lawn.**
  - **Ans:** A lawn is a stretch of open, grass-covered area, usually maintained at a low height, used for aesthetic and recreational purposes in gardens or landscapes.
- **(ii) Write the name of any one floriculture as a subject is taught.**
  - **Ans:** B.Sc. (Horticulture)
- **(iii) What are enrichment items?**
  - **Ans:** Enrichment items are features added to a garden to enhance its beauty and sensory appeal, such as water bodies, sculptures, lighting, fragrance, and sound.
- **(iv) Give one example of an indoor plant that is propagated by stem cutting.**
  - **Ans:** Money Plant (*Epipremnum aureum*)
- **(v) \_\_\_\_\_ is the technique of providing favourable environmental or growth conditions to the plants.**
  - **Ans:** Protected cultivation
- **(vi) Name the basic principle involved during greenhouse cultivation.**

- **Ans:** Greenhouse effect (trapping of solar radiation to maintain warmth inside)
- **(vii) Name one post-harvest treatment given to the cut-flowers.**
  - **Ans:** Pre-cooling

**4. Answer any 5 out of the given 6 questions. 5x1=5**

- **(i) Define floral arrangement.**
  - **Ans:** Floral arrangement is the art of organizing and arranging flowers, foliage, and other plant materials in a visually pleasing manner for decoration.
- **(ii) Where in India was the first Horticultural University established?**
  - **Ans:** In Himachal Pradesh — Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni (established in 1985)
- **(iii) Name the company which developed ArchiCAD.**
  - **Ans:** Graphisoft
- **(iv) Name one common weed found in lawns.**
  - **Ans:** Cyperus rotundus
- **(v) Name one indoor plant in which pinching can be practised.**
  - **Ans:** Coleus
- **(vi) Write the method by which Chrysanthemums can be multiplied.**
  - **Ans:** Suckers or terminal cuttings

**5. Answer any 5 out of the given 6 questions. 5x1=5**

- **(i) Which part of the home garden is easily viewed from the street?**
  - **Ans:** Front garden
- **(ii) Which flower is commonly known as Sword Lily?**
  - **Ans:** Gladiolus
- **(iii) Name the national flower of Spain.**
  - **Ans:** Carnation
- **(iv) Write the name of the most popular method of flower arrangement.**
  - **Ans:** Ikebana
- **(v) Write the ways to propagate Orchids.**
  - **Ans:** By division, offsets, and tissue culture
- **(vi) \_\_\_\_\_ is the most important desiccant used for drying ornamental plant parts.**
  - **Ans:** Silica gel

**6. Answer any 5 out of the given 6 questions. 5x1=5**

**(i) What is the purpose of a bird bath in a garden?**

**Ans:** To attract birds and provide them with water for drinking and bathing, enhancing the garden's beauty and ecological balance.

(ii) \_\_\_\_\_ flower is an indicator plant for fluoride pollution because it expresses the effects of fluorine at a very low level part/billion.

Ans: Gladiolus

(iii) \_\_\_\_\_ is the part of the home garden which provides room for necessities for the family members.

Ans: Backyard

(iv) Write the full form of CAD.

Ans: Computer-Aided Design

(v) Which Japanese art arrangement of flowers involves the use of fruits and vegetables along with flowers?

Ans: Morimono

(vi) Define commercial horticulture.

Ans: Commercial horticulture is the large-scale production and marketing of fruits, vegetables, flowers, and ornamental plants for profit.

## SECTION B

### (Subjective Type Questions)

*Answer any 3 questions out of the given 5 questions on employability skills. Answer each question in 20-30 words. 3x2=6*

**7. What is self-awareness?**

Ans: Self-awareness is to be aware of one's personality traits and make the best out of one's strengths. It is understanding one's own needs, desires, habits, traits, behaviours, and feelings.

**8. Write the list of activities which help in controlling the emission of greenhouse gases while protecting the environment.**

Ans: To reduce the emission of greenhouse gases, people must reduce the use of fossil fuels by finding less polluting energy sources, such as Compressed Natural Gas (CNG). Greenhouse gases such as carbon dioxide, methane, nitrous oxide, etc, that are emitted by the burning of fuel can trap the heat from the earth and increase global warming.

**9. Write any four stages of active listening.**

Ans: The stages of active listening are as follows.

- 1. Receiving: It involves listening attentively.
- 2. Understanding: It is an informed agreement about something or someone.
- 3. Remembering: It refers to the retrieval or recall of some information from the past.

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- 4. Evaluating: It is about judging the value, quantity, importance, and amount of something or someone.
- 5. Responding: It is about saying or doing something as a response to something that has been said or done. (any four)

**10. Mention four SMART goals of an entrepreneur.**

**Ans:** Goals should be stated in specific terms.

- Goals should always be measurable.
- Effective goal setting should include action-based steps that one will follow to achieve the goal.
- Goals must always be realistically attainable.
- Goals must have deadlines.

**11. Name any two software used for creating a presentation.**

**Ans:** LibreOffice Impress and Microsoft Office – PowerPoint.

*Answer any 3 out of the given 5 questions in 20-30 words each. 3x2=6*

**12. List four CAD software used in landscaping.**

**Ans:** AutoCAD, ArchiCAD, SketchUp, LANDWorksCAD

**13. Explain the following components of commercial floriculture:**

**(i) Florist trade**

**(ii) Plant and bedding plant nursery**

**Ans:** (i) Florist trade – It involves the sale and arrangement of cut flowers, bouquets, floral designs, and decorative pieces for various occasions and events.

(ii) Plant and bedding plant nursery – This includes the production and supply of flowering plants, seedlings, and seasonal bedding plants used for landscaping and home gardens.

**14. Explain Western flower arrangement.**

**Ans:** Western flower arrangement emphasizes symmetry, volume, and mass. It typically uses a central focal point with flowers arranged in geometric shapes like triangles, domes, or vertical forms. It focuses more on fullness, colour balance, and decorative appeal.

**15. Write in brief about flori-clinics and consultancy services in commercial floriculture.**

**Ans:** Flori-clinics and consultancy services offer expert guidance to floriculturists and flower growers. They provide solutions for pest and disease control, cultivation practices, post-harvest handling, and marketing strategies to improve productivity and quality in floriculture.

**16. Write four aesthetic/social benefits of having a lawn in a garden.**

Ans: A healthy lawn absorbs rainfall six times more effectively than a wheat field and four times more than a hay field. This attribute is certainly important in enhancing groundwater recharge.

- Lawn helps in the entrapment and biodegradation of organic chemicals and the conversion of carbon dioxide emissions.
- It enhances heat dissipation and temperature moderation. Turf grasses, through the cooling process of evapotranspiration, serve an important function in dissipating the high levels of heat generated in urban areas.
- The rough surface characteristics of turf grass function in noise reduction as well as in multi-directional light reflection that reduces glare.

**Answer any 2 out of the given 3 questions in 30-50 words each. 2x3=6**

**17. List the three areas by which a property area can be divided.**

**Ans:**

- Public area/ Approach area/ Front area
- Family area/ Private living area
- Service area/ Utility area

**18. Write the characteristics of plants suitable for making topiary.**

**Ans:** Characteristics of plants suitable for making topiary:

- Should have lush, shiny, dark green foliage
- Should be hardy and able to withstand the frequent cutting and clipping
- Should have dense growth

**19. Write the various grades of Gladiolus obtained after its grading on spike characteristics.**

**Ans:**

**Different grades of gladiolus:**

Grade	Spike length (cm)	Number of florets (minimum)
Fancy (Grade A)	> 107	16
Special (Grade B)	96 to 107	14
Standard (Grade C)	81 to 96	12
Utility (Grade D)	< 81	10

**Answer any 3 out of the given 5 questions in 50 80 words each. 3x4=12**

**20. Enlist the various characteristics of plants that make them suitable for hedge making.**

**Ans:** Plants suitable for making hedges should have the following characteristics

- The plant should be vigorous and quick-growing.
- It should be hardy and able to withstand regular clipping
- It should be dense in its growing habit. It should not attract rodents and snakes, etc.
- It should be easily propagated either by seeds or vegetative means.

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- When used as a protective hedge, it should possess thorns.
- When used as an ornamental hedge, it should possess good foliage or flowers, or both.
- The hedges should be drought-tolerant.

**21. Write the list of various indirect subsidiary enterprises associated with commercial horticulture.**

**Ans:** The indirect subsidiary enterprises associated with commercial horticulture are,

- i. Manufacturing Pots: Different types of pots, i.e., earthen, plastic, brass, glass or concrete, are required to grow various types of ornamental plants.
- ii. Greenhouse material: For quality flower production, greenhouses have become an indispensable part of the floriculture industry.
- iii. Packaging material: For marketing of various floricultural products, good packaging material made of corrugated cardboard, wooden or plastic baskets, bamboo baskets, etc, is essential.
- iv. Transporting floricultural products: For transporting the flower products from their place of production to the actual marketing.
- v. Cold storage: Flowers should be stored at the recommended temperature in the cold storage. The cold storage built at the production centres and wholesale markets will be of great utility.
- vi. Flower preservatives: Flower preservatives can enhance the longevity of flowers and foliage. Thus, some people can also be involved in this trade.
- vii. 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.

**22. Describe the various factors to be considered during watering of indoor plants.**

**Ans:** There are several basic points to consider during watering:

- Plants with large or very thin leaves and those with fine surface roots usually require more frequent watering than succulent plants with fleshy leaves and stems that are able to store water internally.
- In warm, dry, sunny locations, plants need more frequent watering than they do in cool, low-light situations.
- A large plant in a small pot will need water more often than a small plant in a large pot.
- Flowering plants and rapidly growing plants dry out more quickly than plants with slow growth rates.
- Different soil mixes require different watering schedules. Heavy fine-textured potting media and those that contain a lot of peat moss hold more moisture than loose, porous mixtures of bark, sand, and perlite.
- Water evaporates rapidly from the sides of an untreated porous clay pot, but not at all from plastic or glazed ceramic containers.

- Apply enough water to moisten the entire soil volume, plus a little extra to leach soluble salts out of the container.

**23. What are the main functions of a family or private area of the home garden?**

**Ans:** Generally, the main functions of this area are given below:

- Screening neighbors from viewing and hearing.
- Screening from the wind and shading from the sun.
- Providing comfort to the family members.
- Entertaining personnel guests.

**24. Describe the process of storage of dried ornamentals.**

**Ans:** Different containers like glass desiccators, tin boxes, cartons, wrapped with plastic sheets or wax paper, and herbarium vasculums fitted with cork sheets are used for storing dried ornamentals.

- A small quantity of silica gel in sachets may be placed at the bottom and sides of dried ornamentals for absorbing moisture.
- Always protect dried ornamentals from direct sunlight or more intense light, especially from incandescent lamps.
- The storage should be dust-free, and keep on cleaning the cartons/ boxes from time to time.
- Store separately different types of dried ornamentals and fix a proper label outside with a complete description of the product and dried ornamentals kept inside, which will be very helpful during handling, transportation, and marketing.

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