

Class 12 Horticulture Sample Paper 2026 Solved

SECTION A: OBJECTIVE TYPE QUESTIONS

1. Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)

i. Soft Skills are known as

- a) **People skills**
- b) Personal skills
- c) Audience Skills
- d) Receiver Skills

ii. In Acronym SMART, the letter 'R' stands for:

- a) Rational
- b) Recognize
- c) **Realistic**
- d) Reassure

iii. Five Factor Model (FFM) is applicable in:

- a) Stress Management
- b) **Personality**
- c) Motivation
- d) Positive Attitude

iv. PowerPoint is a presentation software belongs to

- a) Apple
- b) Google
- c) **Microsoft Office**
- d) OpenOffice

v. The ability to continue to do something, even when it is difficult is called:

- a) Decisiveness
- b) Organizational skill
- c) Interpersonal skills
- d) **Perseverance**

vi. What are the 3R's? 1

Ans: Reuse, reduce, and recycle.

2. Answer any 5 out of the given 7 questions (1 x 5 = 5 marks)

i. Write the common method of propagation of lawn/turf grasses?

Ans: Dibbling

ii. Name flower crop which is being used to express love on Valentine's Day?

Ans: Rose

iii. Name any two traditional flower crops to be used for loose flower purposes?

Ans: Marigold, Jasmine

iv. Write the name of top ranked flower crops in the international market?

Ans: Rose, Chrysanthemum, Carnation

v. Name any two employment avenues in floriculture sector?

Ans: Loose flowers, Cut Flowers, Nursery Production, Value addition, Landscaping, etc.

vi. Write any two universities offering floriculture courses?

Ans: Central Agricultural University, Imphal; Anand Agricultural University, Anand

vii. Name any two general functions for home landscaping?

Ans: Screening for privacy, minimizing noise, etc.

3. Answer any 6 out of the given 7 questions (1 x 6 = 6 marks)

i. Write the name of two popular varieties of rose flower grown under protected structures.

Ans: First Red, Grandgala, Confetti, Noblesse, etc.

ii. Name any two functions of private area of any home?

Ans: Screening from wind and shading from sun; Entertaining personnel guests, etc.

iii. Write the name of two climbers used to make arches in the garden.

Ans: *Hedera helix*, *Clematis* spp., *Allamanda violacea*.

iv. Write the scientific name of Bermuda/Doob grass used for making lawn.

Ans: *Cynodont dactylon* L.

v. Name any two shrubs used for edging purposes.

Ans: *Alternanthera amabilis*, *Justicia gendarussa*, *Plumbago capensis*, etc

vi. Name any two tangible features/ornaments of the garden?

Ans: Statue, Trees, Sun Dials, etc.

vii. Write the two major diseases of any lawn?

Ans: Fairy ring spot, Dollar spot, Pale or Yellow Lawn

4. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)

i. What is the Full form of CAD?

Ans: Computer-Aided Design

ii. Name any two most commonly used CAD software?

Ans: AutoCAD, ArchiCAD

iii. Name any two foliage indoor plants that can grow under low light conditions?

Ans: *Aglaonema*, *Monstera*, etc.

iv. Write any two indoor plants propagated through stem cuttings?

Ans: *Aglaonema*, *Coleus*, *Euphorbia*.

v. Name any two most common insects of indoor plants?

Ans: Red spider mites, aphids, and mealy bugs.

vi. What is the scientific name of African and French marigold flower crops?

Ans: *Tagetes erecta* or *Tagetes patula*

5. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)

i. Name any two flower crops used for both cut and loose flower purposes.

Ans: Chrysanthemum, Tuberose

ii. Write the names of any two fragrant flower crops.

Ans: Rose, Tuberose

iii. Name any two varieties of carnation grown under protected cultivation?

Ans: Lipstick, Empire, Romana, White Tendra,

iv. Name any two orchids having epiphytic growth habit?

Ans: Dendrobium, Vanda

v. Name any two types of Japanese flower arrangements?

Ans: Morimono, Nageire

vi. Write any two features of public area of outdoor rooms?

Ans: Entry Way, Front Lawn, Parking

6. Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)

i. Name any two desiccants commercially used for drying of flowers?

Ans: Silica gel, Sand

ii. Write two methods of drying of flowers and foliage.

Ans: Air drying, Press drying, Freeze drying

iii. Name any two flower crops suitable for water drying?

Ans: Hydrangea, Baby's breath

iv. Name any two common post-harvest disorder of rose flower crop?

Ans: Bent neck

v. Write the storage temperature of gerbera flowers?

Ans: 2-5 °C for 2 days

vi. What is the name of process of removing field heat from flowers?

Ans: Pre-cooling

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.

7. What are the various factors that affect Active listening?

Ans: Eye contact, Gestures, Avoiding distractions, giving feedback.

8. Suggest any four ways in which a person can handle the stress.

Ans:

- Practice meditation and yoga.
- Talk to friends and family for comfort.
- Keep your thoughts in the present.
- Maintain an accomplishment sheet and enter even small achievements.

9. Enlist any four advantages of Presentation Software.

Ans: Advantages of Presentation Software

- Making changes in digital presentations is easy.
- It can be printed and distributed to the audience.
- They can showcase images, videos, animations, and music.
- Can be shown to a large no of masses by projecting on a screen.

10. What do you understand by the term technical entrepreneurs?

Ans: In this, the person uses their technical expertise to create and offer machines, tools, and methods. Innovation is also done to make the industrial process seamless and efficient.

11. What are the benefits of Green Jobs?

Ans: Benefits of green jobs

- Increases the efficiency of energy and raw materials.
- Reduce greenhouse gas emissions.
- Control waste and pollution
- Support adaptation to the effects of climate change.

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

12. What do you understand by term Topiary?

Ans: Topiary is the art of training plants into different shapes or creating sculptures using clipped trees, shrubs, and subshrubs. Plants should be evergreen, have small leaves, and have dense foliage. Eg. *Duranta plumeri*.

13. What is service area of outdoor room concept?

Ans: Service area: This is that part of the home garden which provides room for necessities such as a greenhouse, a vegetable garden, a cut or loose flower garden, and a firewood store.

14. Define mowing and rolling in lawn management?

Ans:

- Mowing: It is the cutting of lawn grass for maintaining its attractiveness for maximum utility. In one mowing, not more than 1/3rd the leaves are removed.
- Rolling is a method of correcting minor variations in the turf grass surface, particularly those caused by pedestrian traffic. The lawn is rolled slightly while the same is being established. Rollers should never be run on a wet lawn.

15. What is flower arrangement?

Ans: Flower arrangement: Arranging flowers is a kind of art and design. It is two types. Japanese and English flower arrangement.

16. What do you understand by freeze drying?

Ans: Freeze drying: Flowers and foliage are dried at very low temperature (-35°C). In this method, flower colour and form remain unchanged.

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

17. Differentiate between public area and private area of outdoor room concept?

Ans:

Public area	Private area
A place accessible to the public or outsiders for their use and enjoyment.	It is owned and maintained by a single individual or family.
It can be a small park, roads.	House, garden, building, apartment

18. Write about plant nursery and seed production employment avenue of floriculture sector?

Ans: Plant Nursery:

This is another component of commercial floriculture, and in every small or big town or suburb, general or specialized plant nurseries are coming up, and the demand for plants for interior, exterior decoration/ landscaping is increasing very fast. There are over fifty thousand ornamental plant nurseries in the country, and alone in/around Kolkata, there are over three thousand ornamental/ bedding plant nurseries. Imp factors are

- Site selection: Near the marketing Centre for easy transportation. Avoid any building, perennial water supply source. Agro climatic conditions, soil type, pH, and market demand these factors are also considered.
- Product choice: Planting materials such as seedlings of flowers, foliage, bulbs, plants suitable for parks, offices, roadside plantations, and hospitals, and residential areas are being grown.
- Propagation methods: Seed (age, maturity of seed, dormancy, water supply, temp- these factors affect).
 - Vegetative method: Cutting, layering, division and separation, grafting, budding
 - Tissue culture: Eg, orchid through meristem culture.
- Structures required:
 - Workshed: 6x4.5m thatch roof with locally available materials
 - Polyhouse: 9x4 m with 90 cm brick wall, 3.6m tall rhombus netting
 - Store cum office: 6x4.5m dimension
 - Fencing:
- Land preparation: ploughing and cross-ploughing are done.
- Seed production: In flower crops, in recent years, the demand for hybrids (F) has increased very fast in bedding plants, annuals, and herbaceous perennials.
- There is a unique demand for F2 seeds in ornamental annuals and perennials, unlike any other sector of agriculture.
- Open-pollinated formulae mixture seeds are also in demand, in addition to inbred and pure line seed varieties.

19. Differentiate between edge and hedge with suitable examples of plants?

Ans:

Hedge	Edge
It is a line of closely spaced shrubs and sometimes trees, planted and trained to form a fence.	They are planted on the border of the plot.
Height is 1-3 m.	Height is 20-30 cm.
Eg., <i>Inga dulchis</i> , <i>Karina</i>	Eg., <i>Alternanthera</i> , <i>Justicia</i> , etc

Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

20. Write about present scenario and scope of floriculture in India?

Ans: Present scenario and scope

- Features of Commercial Floriculture in India
 - 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, especially the disposable income

- Change in rural-urban population ratio
- Higher population growth rate in cities
- Export of different floricultural products from India
- First All India Coordinated
- Floriculture Improvement Project was started in 1971 with its headquarters at IARI New Delhi, which has 15 funded, four ICAR institution's and two volunteer centers covering 17 states in India. Under this project, research on twelve crops viz., Rose, Gladiolus, Gerbera, Carnation, Chrysanthemum, Orchids,
- Anthurium, Tuberose, Lilium, Alstroemeria, Tulip, and daffodils are being studied through 64 research projects.
- Area and production of Flower crops in India
- Leading states in Flower acreage (thousand ha) in India
- Traditional flowers like Marigold, Jasmine, Rose, China aster, Chrysanthemum, Crossandra, Tuberose, etc. are grown in our country in 2/3rd area.
- Modern flowers like Rose, Carnation, Gladiolus, Chrysanthemum, Tuberose, and Orchids are grown in 1/3rd the area.
- In India total area under modern floriculture is about 700 ha, 70% of which is in greenhouses, and 90% of this is under roses.
- The main production centres of modern flowers are at Bangalore, Pune, Nasik, Hyderabad, Chennai, Kalimpong, Delhi, Gurgaon, etc.

21. Describe in detail about establishment methods, various maintenance operations, diseases, and insects of the lawn?

Ans: Lawn establishment method:

- Seeding: seeds are mixed with sand and broadcast.
- Dibbling: a small bunch of grass, along with the root and a little stem, is planted.
- Plastering: Grass roots with little stems of 4-5 cm long pieces are mixed with compost and planted.
- Sprinkling: used in the rainy season
- Turfing: small pieces of well-prepared turf cut into a square or rectangular shape and planted.

Maintenance operations:

- Mowing
- Weeding
- Rolling
- Sweeping
- Scrapping
- Bricking

Diseases: Damping off, fairy ring spot, leaf spot, grey mould

Insects: Termites, ants

22. Write the protected cultivation of roses with respect to soil and climate, varieties, major insect pests, and diseases.

Ans: Protected cultivation of rose:

- Soil: well-drained sandy loam soil with pH 6.0-7.5

- Climate: day temp 24-26 °C, night temp 15-17 °C, RH= 75%, CO₂= 1000-3000 ppm
- Varieties: First Red, Grand Gala, Konfetti, Noblesse, Skyline
- Media preparation: both soil and soilless substrate (rockwool, Peat, sphagnum moss, etc.); pH-5.5-6.8;
- Bed size: 1-1.6 m wide, 30-40 m long, 15-20 cm height
- Spacing: 30-40 x 15-20 cm
- Planting: May-June; done in 2 row system; 7-8 plants/m²
- Fertilizers: FYM 100 t/ ha; N:P:K=3%:0.2%:1.8%; Ca= 1%; Mg= 0.25%
- Important operations: Bending, pruning, deshoooting, disbudding, bud capping
- Diseases: Dieback (*Diplodia rosarum*), Black spot (*Diplocarpon rosae*), Powdery mildew (*Sphaerotheca pannosa* var. *rosae*).
- Insect pest: Aphids (*Macrosiphum rosae*), Red scale (*Lindigapsis rosae*), Chaffer beetles (*Onycetonia varsicolor*).

23. Write in detail about the different methods of drying of flowers and enlist various value-added floral products.

Ans:

- Drying methods:
 - Air drying: They are naturally dried either on the plant part (in situ drying) or after removal of flowers from the stem, then kept for drying on a flat surface. E.g.. Paper flower, straw flower.
 - Microwave: Plant parts are kept in a non-metallic container and microwaved for 2-5 minutes and dried at a range of 300-700 Hz.
 - Embedded: Plant parts are embedded into desiccants like silica gel, borax, sand, etc. Color and shape remain intact in this method.
 - Freeze drying: Flowers are arranged in the specimen chamber and frozen at -35 °C.
 - Glycerin: Hydrangea, corn flowers are dried by this method
 - Press: a flower is pressed using a herbarium/ plant press.
- Value-added product: Flower arrangements, Bouquets, Festive decorations. Pot porris

24. Write in detail about the different methods of storage.

Ans: Storage methods of flowers

Storage is highly useful to regulate the supply in the markets to prevent glut, especially when the prices crash down. There are 4 types of storage:

- a. Refrigerated storage: most widely used.
 - Wet storage: flowers are stored with their bases dipped in water or preservative solution. It is for a short duration. Temp is 2-4°C. eg, rose 4°C.
 - Dry storage: sealed in plastic bags to prevent moisture loss. This is for a long duration, and the temperature is 0.5-1°C. eg, rose 0-1°C.
- b. Controlled atmosphere: Low temp storage in gas-tight chambers under decreased levels of O₂ and increased levels of CO₂.
- c. Modified atmosphere: Less precise form of CA storage, dry storage of flowers in sealed bags leads to a reduction of O₂ and an increase in CO₂ level due to tissue respiration.
- d. Hypobaric or low-pressure storage: low-pressure condition with high RH (90-95%).