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**Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)**



B. Sc. (Ag.)(Sixth Semester - Regular) Examinations, April - 2026

HORT(E)-323- Protected Cultivation

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.

PART – A

Q.1. Fill in the blanks with suitable word / figure.

(0.5 x 10 = 5 Marks)

- Scientific name of gerbera.....
- Protected cultivation started in India byyear
- Day length required for chrysanthemum cultivation under greenhouse.....
- Growth regulator used for flower forcing.....
- Multispan greenhouses should be oriented indirection.
- Optimum relative humidity required for plant growth.....
- Harvesting index for liliun.....
- Temperature required for controlling soil insects is
- Water requirement of rose per day.....
- Acrylic sheets are available with a thickness of.....mm

Q. 2. Define (or) Explain the following in one or two sentences.

(1 x 5 = 5 Marks)

- Hill row system
- Fumigation and example
- Lean to type greenhouse
- Determinate type of tomato
- Aquaponics

Q3. Match the following

(0.5 x 10 = 5 Marks)

Column – A	Column – B
(a) Fumigation	(i) Charcoal
(b) Polyethylene	(ii) 20 years
(c) Sprinkler	(iii) Surface irrigation
(d) Anthurium	(iv) Media
(e) Low pH	(v) Overhead irrigation
(f) Glass	(vi) Formalin
(g) Perimeter watering	(vii) Coconut husk
(h) Bagasse	(viii) 2-3 years
(i) High pH	(ix) Lime
(j) Orchids	(x) Gypsum

Q4. Write True or False against each statement

(0.5 x 10 = 5 Marks)

- a. Rootstock used for rose propagation is *Rosa indica* var. *Odorata*.
- b. Relative humidity measured by hygrometer.
- c. Greenhouse provides favourable climate to plants.
- d. Terrestrial orchids grown in other plant material.
- e. Strawberry is commercially propagated by runners.
- f. EBB Flow system is adopted for fertilizer application inside the greenhouse.
- g. National flower of Spain is carnation.
- h. High C-N ratio leads to vegetative growth.
- i. Netting is done in rose.
- j. In anthurium male and female flowers are present in spathe.

PART – B

Attempt ANY FIVE questions. All question carries equal marks

(6 x 5 = 30 Marks)

- 5. a. Define cladding material? (1M)
b. Write about characteristics of any 5 cladding material used for greenhouse construction. (5M)
- 6. Explain about bed preparation and planting of strawberry and carnation under greenhouse and mention 2 varieties each.
- 7. Explain about package of practices followed for rose under greenhouse.
- 8. List out the climate control methods and explain the operations followed for light and temperature control inside the greenhouse.
- 9. Explain about training and pruning methods followed in tomato and capsicum for better yield.
- 10. Define and explain about Container gardening for greenhouse production of vegetables and flowers.

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