GLOSSARY

Bulbous plant: *In nature there are certain plants which have modified underground stem in which food material in stored to overcome the unfavourable season. In Horticulture the plants which are propagated through modified under-ground storm are called as Bulbous plants.*

Cladding Material: *Covering material of the greenhouse, i.e., polythene, shade net or polycarbonate, etc.*

Clogging: *Blockage*

Coco peat: *Growing medium prepared from dried powder of coconut plant fibres*

Compatibility: *Miscibility or mixing ability without precipitation*

Crop-water-requirement: *the water requirement of the crop, which includes transpiration of the crop, as well as, direct evaporation from the soil.*

Dolomite lime: *It is a rock which consists of calcium magnesium carbonate. Dolomite lime fertiliser is certainly allowed in organic gardening.*

Dripper: *Water emitting hole in the drip irrigation pipe also called emitter.*

EC Meter: *Device to measure the electrical conductivity of water or aqueous phase of soil.*

EC (Electrical conductivity): *The measurement of salt content in the extracted soil water when the soil is saturated with water expresser in millimhos per cm.*

Evapo-transpiration: *It is water loss through transpiration from plants canopy and evaporation from the soil surface and expressed in mm/day.*

Fertigation: *Artificial fertiliser application in a closed irrigation system. Pesticides and fungicides can also be applied in this way.*

Greenhouse effect: *A phenomenon in which the atmosphere traps radiation, caused by gases such as carbon dioxide, water vapour and methane (by polythene in a polyhouse) that allow more sunlight to pass through but less to return back from the earth's (greenhouse) surface.*

Gutter: *Channel for collecting water for run-offs from the roof of plants in a soil is reached when the suction force of plants cannot overcome tension by which groundwater is tied by the soil. At this point plants start to wilt.*

Hygrometer: *Device to measure relative humidity*

IR-Transmission: *Penetrability of heat radiation through plastic films*

Lux Meter: *Device to measure light intensity*

Micronutrients: *Nutrients which are required by plants in very minute dosages or in traces only.*

Multi-span greenhouses: *Greenhouses with more than two attached covers (tunnels)*

Multi span: *It refers to more then two interior column or multiple standing columns to support structure*

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Pan evaporation: *It is the evaporation of water from open surface and is recorded at meteorological station on a daily basis and expressed in mm/day, under protected.*

Peat: *A brown colour material consisting of partly decomposed vegetable matter forming a deposit on acidic, boggy, ground, which is dried for use in gardening and as fuel.*

Perlite: *White granular particles formed when volcanic mineral rock is heated quickly, causing it to expand. It is used in many potting mediums.*

pH or Soil reaction: *pH is a measure of hydrogenion concertration; a measure of the acidity or alkalirity of a solution.*

pH-meter: *digital meter (in pocket size) to measure the acidity in moist soil. The most favourable levels are in the range between 6 and 7.*

Protected Cultivation: *Cultivation of crops under protected structures like glasshouses, polyhouses, tunnels, shade nets for protection from biotic and abiotic stress for a healthy production system.*

Pro-tray: *Plastic trays used for soilless production of nursery*

Shade net house: *Protected structures covered by a shade net often on all sides to protect the crop from intense solar radiation*

Sterilisation: *Disinfestations of any medium or container or soil to make it free from infection of bacteria, fungi or other microbes and or disable any living entity to reproduce. It is also called ascepticisation.*

Single span: *A gap between two supports, single span structure has a single interior column or free standing structure.*

Sphagnum moss: *It is commonly known as peat moss. Mosses that belong to the sphagnum genus are known for their high water retention potential. As sphagnum can absorb water rapidly and maintain the moisture content, it allows the succulents to stay hydrated.*

Substrate: *The surface or material on which an organism lives, grows, or obtains its nourishment.*

Transpiration: *The sum of water physiologically evaporated or transpired by the plant*

Vacuum-effect: *A strong stream of air over the greenhouse cover, which induces lower air pressure within the greenhouse.*

Ventilation box: *Box protecting against sunlight allowing for free airflow in protected cultivation*

Ventilation: *Movement or exchange of air across the system or cross aeration*

Vermiculite: *It is a yellow or brown mineral found as an alteration product of mica and other minerals, used for insulation or as a moisture-retentive medium for growing plants.*

Walk-in tunnel: *Protected structures covered by polythene, high enough for walking by workers and open on both the ends generally to allow pollinators*

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Further Readings

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Answer Key

UNIT 1: Introduction to Protected Cultivation

Session 1: Importance of Protected Cultivation

A. Fill in the blanks

1. Export quality
2. High rainfall area
3. Protected structure
4. Protected structure

B. Mark the correct answers

1. (c) 2. (a) 3. (b)

C. Match the columns

1. (c) 2. (a) 3. (d) 4. (b)

Session 2: Site Selection and suitable crops for Protected Cultivation

A. Fill in the blanks

1. 6.0 to 6.5
2. 10–15 m
3. Four
4. Self-pollinated
5. Standard type

B. Mark the correct answers

1. (b) North–South
2. (b) Western
3. (a) 40:60

C. Match the columns

1. (d) 2. (a) 3. (b) 4. (c)

UNIT 2: Types of Protected Structures and their Components

Session 1: Types of Protected Structures

A. Fill in the blanks

1. Miniature
2. Up to 1 m high
3. 200 micron
4. 2–2.5 metre
5. 40 or 50 mesh

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B. Mark the correct answers

1. (b) 2. (d) 3. (b)

C. Match the columns

1. (c) 2. (d) 3. (b) 4. (a)

Session 2: Classification of Greenhouses

A. Fill in the blanks

1. Greenhouse
2. Bamboo or Wooden
3. Fan, Pad and heaters
4. 6.5–7
5. High cost

B. Mark the correct answers

1. (d) 2. (c) 3. (a)

C. Match the columns

1. (c) 2. (d) 3. (a) 4. (b)

Session 3: Major Components of Greenhouse

A. Fill in the blanks

1. Cladding material
2. Collecting
3. UV stabilised

B. Mark the correct answers

1. (b) 2. (a)

C. Match the columns

1. (b) 2. (c) 3. (d) 4. (a)

UNIT 3: Preparation of Media and Container for Commercial Cultivation in Greenhouses

Session 1: Growing Media and its Composition

A. Fill in the blanks

1. Coco peat
2. Perlite
3. Calcium and magnesium
4. 3:1:1
5. Vermiculite

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B. Mark the correct answers

1. (c) 2. (d) 3. (a) 4. (d)

C. Match the columns

1. (c) 2. (d) 3. (a) 4. (b)

Session 2: Sterilisation of Growing Media

A. Fill in the blanks

1. Soil sterilisation
2. Formaldehyde
3. 35–40

B. Mark the correct answers

1. (a) 2. (c)

C. Match the columns

1. (d) 2. (c) 3. (a) 4. (b)

Session 3: Preparation of Beds and containers for growing crops

A. Fill in the blanks

1. Clay pot
2. Pro-trays

B. Mark the correct answers

1. (c) 2. (d)

C. Match the columns

1. (d) 2. (c) 3. (b) 4. (a)

UNIT 4: Irrigation and Fertigation in Greenhouses

Session 1: Micro Irrigation Systems and their Application under Protected Cultivation

A. Fill in the blanks

1. 12 mm and 16 mm
2. 1
3. Cleaning dust
4. 6.5–7.0
5. 20
6. 3–4 liters

B. Mark the correct answers

1. (d) 2. (c)

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C. Match the columns

1. (c) 2. (d) 3. (b) 4. (a)

Session 2: Types of Fertilisers and their Scheduling

A. Fill in the blanks

1. Fertigation
2. Nitrogen
3. Ammonium nitrate
4. Phosphorus

B. Mark the correct choice

1. (a) 2. (b) 3. (d) 4. (c)

C. Match the columns

1. (d) 2. (b) 3. (a) 4. (c)

UNIT 5: Greenhouse Operations for Environmental Control

Session 1: Equipment for environmental parameters monitoring in greenhouses

A. Fill in the blanks

1. 5.6–6.3
2. 1000
3. 60–80
4. 18–26 °C

B. Mark the correct choice

1. (a) 2. (c) 3. (b)

C. Match the columns

1. (b) 2. (d) 3. (a) 4. (c)

Session 2: Management of Environmental Parameters in Greenhouse

A. Fill in the blanks

1. Fogger
2. Black net
3. Shading net

B. Mark the correct answers

1. (b) 2. (a) 3. (c)

C. Match the columns

1. (c) 2. (a) 3. (d) 4. (b)

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