





3. Fill in the blanks.

- Respiration shown by green cells only during day time is \_\_\_\_\_
- The practice of growing plants in soil less nutrient medium is \_\_\_\_\_
- Removal of immature anther or androecium from a bisexual flower is \_\_\_\_\_
- Secondary cortex is known as \_\_\_\_\_

4. Match the following :

A

B

C

Endosmosis

Inter generic hybrid

Chemosynthesis

Nitrosomonas

Guard cell

Allopolyploid

Stomata

Semipermeable membrane

Transpiration

Raphanobrassica

Bacteria

Hypotonic solution

5. Answer in one **word** or in one **sentence**.

- Neutral stains.
- A group of immature and undifferentiated cells in a continuous state of division.
- Quantasomes.
- A variety or species introduced from a foreign country. **(5×1=5)**

#### SECTION – B

Answer **any four** (Differentiate the following. **Each** question carries a weightage of 1)

- Photosynthesis and chemosynthesis.
- Oil glands and nectaries.
- Sieve tubes and sieve cells.
- Phytochrome and vernalin.
- Primary and secondary introduction.
- Senescence and Richmond – Lang effect. **(4×1=4)**



#### SECTION – C

Answer **any five** (Short answer questions. **Each** question carries a weightage of 1)

- Explain photomorphogenesis.
- What are pits ?
- Explain the different types of hybridisation.
- List out the anatomical adaptations of xerophytes.
- Elaborate on Donnan equilibrium.
- What is meant by guttation ?
- Define quiescent centre. **(5×1=5)**

#### SECTION – D

Answer **any six**. (Short essay questions ; **Each** question carries a weightage of 2)

- Explain the organisation of shoot apex.
- How does cyclic photophosphorylation take place ?
- Roots do not have cambium, but secondary growth occurs in the dicot root. Comment.
- Describe carrier concept of active absorption of minerals.
- Explain Photorespiration.
- What are the anatomical adaptations of halophytes ?
- Write notes on vernalisation.
- Describe briefly the steps involved in hybridisation technique. **(6×2=12)**

#### SECTION – E

Answer **any one**. (Long essay type questions ; **Each** question carries a weightage of 4)

- Explain the mechanism of water uptake in higher plants.
- With the help of suitable diagrams explain the complex tissue Xylem.
- Explain the mechanism of carbon dioxide fixation in C<sub>3</sub> plants. **(1×4=4)**