

Please check whether you have got the right question paper.

- N.B:
1. All questions are **compulsory**.
 2. **Figures** to the **right** indicate **full marks**
 3. Draw **neat and labeled** diagrams wherever necessary.

Q.1 (A) Choose the correct option from the following:

- Simple tissue are _____.
 - parenchyma, xylem and collenchyma
 - parenchyma, collenchyma and sclerenchyma
 - parenchyma, xylem and sclerenchyma
 - parenchyma, xylem and phloem
- Epidermal outgrowths are known as _____.
 - trichomes
 - stomata
 - cuticle
 - wax
- _____ hairs are found in *Thespesia* leaf.
 - Stinging
 - Glandular
 - Peltate
 - 'T' shaped
- Guard cells are surrounded by _____ cells.
 - bulliform
 - subsidiary
 - motor
 - epidermal
- Photooxidation of chlorophyll is prevented by _____.
 - carotenoids
 - anthocyanins
 - phycobilins
 - fucoxanthin
- During photosynthesis, the final product of the calvin cycle is _____.
 - ribulose biphosphate
 - phosphoglycerate
 - pyruvate
 - glyceraldehyde 3-phosphate
- The strongest reducing agent in photosynthetic electron transfer reaction is _____.
 - plastoquinone
 - P₆₈₀
 - P₇₀₀
 - plastocyanin
- Rubber, gums, cellulose are examples of _____ substances.
 - polymeric
 - Alkaloids
 - pigments
 - essential oils

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- i) _____ leaf decoctions are the best bronchodilators.
- Aloe*
 - Adulsa*
 - Haldi*
 - Ginger*
- j) _____ part of *Santalum* plant is used medicinally.
- Stem
 - Bark
 - Seed
 - Leaf

(B) Answer the following in **one** sentence:

- Mention the role of hypodermis in dicot stem.
- What are meristematic tissues?
- Define the process of photosynthesis.
- Name the 4-C compound formed in CAM cycle.
- Name two essential oils found in plants.

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Q.2 Answer **any two** form the following :

- Explain the anatomical characters of monocot root.
- What is simple tissue? Give an account of simple tissue.
- Discuss the internal structure of dicot stem.
- Give a detailed account of any five epidermal outgrowths with suitable examples.

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Q.3 Answer **any two** form the following :

- Describe the regeneration phase of calvin cycle.
- Describe chlorophyll, xanthophyll and carotenoid with reference to their role as important plant pigments.
- Give process of fixation of CO₂ in C₄ plants.
- Describe the process of cyclic photophosphorylation.

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Q.4 Answer **any two** from the following:

- Give an account of secondary metabolites with reference to types, example and functions.
- What is medicinal botany? Give botanical name, family, active constituents and uses of *Aloe*.
- Give botanical name, family, active constituents and uses of *Haldi* and *Ginger*.
- What are primary metabolites? Add a note on different functions of primary metabolites.

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Q.5 Write short notes on (**any four**):

- Tracheids
- Bulliform cells
- Schematic representation of CAM pathway
- Non - cyclic photophosphorylation
- Botanical name and active constituents of *Adulsa*.
- Contents of *Grandma's pouch*

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