

Please check whether you have got the right question paper.

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

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

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- Cotton fibre is a part of _____ tissue system.
 - Epidermal
 - Ground
 - Vascular
 - Meristematic
- Pith is usually composed of _____.
 - Aerenchyma
 - Collenchyma
 - Parenchyma
 - Sclerenchyma
- Guard cells are surrounded by _____ cells.
 - accessory
 - subsidiary
 - motor
 - bulliform
- The limiting layer of cortex is _____.
 - pericycle
 - endodermis
 - hypodermis
 - pith
- The synthesis of ATP in chloroplast is associated with _____.
 - non-cyclic electron flow
 - electron flow between PS II & PS I
 - accumulation of H^+ in the thylakoid
 - all of the above
- At low CO_2 concentration, photosynthesis is limited by _____.
 - carboxylation capacity of Rubisco
 - ability of Calvin cycle enzymes to regenerate RuBP
 - ATP + NADPH
 - all of the above
- The pigment molecules responsible for photosynthesis are located in the _____.
 - cytoplasm of the cell
 - stroma of chloroplast
 - thylakoid membrane of chloroplast
 - nucleus
- Haldi is common name of _____.
 - Curcuma longa*
 - Adhatoda vasica*
 - Zingiber officinale*
 - Santalum album*

- i) Morphine, Codeine are examples of _____.
 i) alkaloids
 ii) lectins
 iii) drugs
 iv) pigments
- j) _____ is an alternative form of medicine which uses different herbs and herbal products for administration to cure different diseases.
 i) Ayurveda
 ii) Allopathy
 iii) Homoeopathy
 iv) None of the above

B) Answer the following in **one** sentence.

- a) What is a dorsiventral leaf?
 b) What are meristematic tissues?
 c) Which wavelengths of light are efficiently absorbed by chlorophyll molecules?
 d) Name any two phenolic compounds found in plants.

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Q.2 Answer **any two** from the following

- a) What are simple permanent tissues? Give an account of sclerenchyma.
 b) Explain the internal structure of monocot leaf.
 c) Discuss the anatomy of dicot stem.
 d) Write a detailed note on epidermal outgrowths studied by you.

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Q.3 Answer **any two** from the following

- a) Describe the various pigments involved in the process of photosynthesis in green plants.
 b) Give a comparative account of process of fixation of CO_2 in C_4 and CAM plants.
 c) Describe the Calvin pathway of carbon fixation in C_3 plants.
 d) Describe the process of non cyclic photophosphorylation.

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

- a) Give an account of secondary metabolites with reference to types, examples & functions.
 b) What are the contents of Grandma's pouch? Give botanical name, family, active constituent and uses of Amla.
 c) Give botanical name, family, active constituents and uses of Tulsi and Sandal wood.
 d) What is medicinal botany? Add a note on primary metabolites.

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Q.5 Write short note on (**Any four**)

- a) Stomata
 b) Xylem tracheids
 c) Role of PEP- carboxylase
 d) Cyclic photophosphorylation
 e) Medicinal uses of Ginger.
 f) Aloe as a medicinal plant

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