

IAS Mains Botany 2005

Paper-II-2005

Section-A

1. Write notes on any THREE of the following in about 200 words each: $20 \times 3 = 60$
 - a. Polytene Chromosome
 - b. Signal Transduction
 - c. Transgenic plants.
 - d. Standard deviation.
2. Describe in detail the ultrastructure of Golgi Complex and its function. 60
3. Answer the following questions
 - a. Describe properties of Genetic Code.
 - b. Describe the role of RNA in origin and evolution. 60
4. Define hybrid vigour. Describe anyone method of hybridization for crop improvement 60

Section-B

5. Write notes on any THREE of the following in about 200 words each: $20 \times 3 = 60$
 - a. Non-cyclic photophosphorylation
 - b. Nitrogenases
 - c. Fruit-ripening
 - d. Afforestation
6. Define auxins. Describe their physiological response in plants.
7. Define biogeochemical cycles. Describe N-cycle.
8. Answer the following questions
 - a. What do you know about Social Forestry?
 - b. How would you measure the level of Air-Pollution?