

- (b) Sensitive plants and tolerant plants.
- (c) Green belt and green corridor.
- (d) Carbon sequestration and Carbon storage.
- (e) Natural Wetlands and Constructed wetlands.
4. (a) Write a note on the importance of biochemical indicators in screening plants for pollution tolerance. (7)
- (b) Which plant species are most commonly used to mitigate air pollution, and what characteristics make them effective? (8)
5. Elaborate on following :
- (a) Highlight the role of green belts in improving air quality, mitigating the urban heat island effect and enhancing biodiversity in Delhi. (8)
- (b) Discuss the benefit of developing a herbal garden in urban green spaces. (7)
6. Write in detail about the methods of ecological sampling and screening the local flora for urban management. Discuss factors effecting plant regeneration and growth. (15)

(100)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 4634

J

Unique Paper Code : 2164001005

Name of the Paper : Green Belt Development and Urban Management for Smart Cities

Name of the Course : BOTANY – GE

Semester : IV

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all.
3. Question No. 1 is compulsory.
4. Attempt **all** parts of a question together.
5. **All** questions carry equal marks.

1. Answer following questions :

(a) Define (**any five**) (5×1=5)

(i) Biological Oxygen Demand

(ii) Biodiesel

P.T.O.

- (iii) Green Economy
- (iv) Suspended Particulate Matter
- (v) Remote sensing
- (vi) Landscape
- (vii) Native Plants

(b) Fill in the Blanks (**any five**) (5×1=5)

- (i) An _____ species is one that has been introduced to a new area where it does not naturally occur, often as a result of human activity.
- (ii) The _____ represents the quantity of carbon held in a specific ecosystem or reservoir at a given moment.
- (iii) A _____ is a tradable permit or certificate that represents the right to emit one metric ton of carbon dioxide or an equivalent amount of another greenhouse gas.
- (iv) The _____ trap heat by absorbing and emitting infrared radiation, which leads to the warming of the planet.
- (v) Index created by government agencies to convey the current or projected air pollution levels to the public is known as _____.

- (vi) Using plants to clean up contaminated environments is known as _____.

(c) Expand (**any five**) (5×1=5)

- (i) APTI
- (ii) UNFCCC
- (iii) GIS
- (iv) NFTP
- (v) EIA
- (vi) TDS

2. Write short notes on following (**any three**) (3×5=15)

- (a) The ecological benefits provided by the green belts.
- (b) Role of macrophytes in constructed wetlands.
- (c) Methods to evaluate effectiveness of green belt.
- (d) Morphological indicators for selection of pollutant mitigating plants.
- (e) Suggested guidelines for the establishment of green belts around industries.

3. Differentiate Between (**any three**) (3×5=15)

- (a) Vegetative and sexual propagation methods of propagation in plants.