

Date - 12-02-2024

online class - J.J. College Ara

Department of Botany - B.Sc - part - II Hon.

Dr Sunil Pandit

E. Copy -

Group - B - paper - III Ecology - Time - 8:30 - 9:30

Question → Describe the Fresh Water and Sea shore vegetation of India?

Ans → Fresh Water vegetation of India → The fresh water vegetation depends upon the supply of oxygen, CO<sub>2</sub>, mineral salt, nature of substratum, depth of water, temperature and light intensity. The fresh water are ponds, pools, tanks, rivers, lakes etc.

The fresh water vegetation may be found in the form of -

- (i) **Submerged plants:** - The plants that are submerged in the deep water of pond, pools and lakes. The common plants are - hydrilla, potamogeton, Vallisneria, Utricularia, Ceratophyllum, Chara, Nitella etc.
- (ii) **partly submerged plants:** - The partly submerged plants are Nilumbum (Lotus), Nymphaea (Water lily), Euryale (Makhana)
- (iii) **Free floating plants:** - The plants that float on the surface of water. The plants are Pistia, Azolla, Salvinia, Eichhornia, Trapa, Wolffia, Lemna etc.
- (iv) **Amphibious plants:** - The plants that occur in muds and the closely associated with water as well as soil. The common plants are - Ranunculus, Marsilea, Sagittaria, Carex, Cypha etc.

Sea shore vegetation of India: - The sea shore vegetation has been classified into following groups: -

- (i) **Mangrove or Littoral forests:** - These forests are found near Kolkata in Sunderbans and at the bank of Hooghly river. The dominant species are Rhizophora, Avicennia, officinalis, Acanthaceae etc.
- (ii) **Sand dunes or Desert vegetation:** - The sand dunes are generally found on the flat sea coasts. They may occur in deserts also. The sand dunes are developed by gradual drifting of sand. On these sand dunes only those plants grow which can tolerate the exposure of moving sand, high temperature in day time, high wind velocity and some salts. Ipomoea pes-caprae is the most common plant.
- (iii) **Beach jungle:** - Beach jungle occurs in Adamans, Sunderbans, along sea coasts of Bengal, Orissa, Madras, Travancore, Cochin and Mumbai. The soil in these areas are sea sand with high lime percentage and low minerals. The common plants are Cocos nucifera and Pandanus.

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Date - 12-02-2024

Department of Botany - B.Sc - part - III - Home - E. Copy

online class J.J College, Ara

Dr. Sunil Pandey

Group - B. plant pathology

Time - 9:30 - 10:30

**Question** → What is Necrosis? point out its various types?

**Ans** - The term necrosis is used to indicate the condition in which the death of cells, tissue and organs occurred as a result of the parasitic activity. The characteristic appearance of the dead area differs with different hosts and hosts organs and with different parasites so that there are different types of necrotic symptoms: -

(i) **spots**: - The cells are killed in definitely limited areas and the dead tissue usually become some shade of brown. In many cases the colour changes, such as yellowing, precede the death of cells.

(ii) **streaks or stripes**: - In some diseases the prominent symptoms consist of an elongated but relatively narrow lesion. These streaks or stripes are usually some shade of brown in colour. The discoloured tissues contain dead cells.

(iii) **Cankers**: - A canker is dead area in the bark or cortex of the stem, especially of woody plants. Although cankers vary much in size they are most commonly rather largest and are often definitely margined.

(iv) **Blight** → This term means a burnt appearance. It refers to sudden death of a plant or its conspicuous parts, such as leaves, blossoms or twigs. The dead organs usually turn brown or black and very soon disintegrate. Early and late blights of potato are good examples.

(v) **Damping off**: - It is a condition in which the stem is attacked near the soil surface. The affected portion becomes constricted and weak incapable of bearing the load of the upper portion.

(vi) **Worm, scald or scorch** → Areas in the succulent organs of plants die and turn brown due to effect of high temperature such as in sun scald of apple.

(vii) **Rot**: - The affected tissue die, decompose to great extent and turn brown. In most cases this condition is brought about by fungi and bacteria which dissolved the cellulose, lignin and other associated substances of the plant tissue.

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