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Class 10th

Sub. Biology

Date 28.05.2020

Growth-related movements in plants

The movements which are growth related are called tropic movements. These movements occur in response to environmental stimuli and the direction of the response is dependent on the direction of the stimulus.

Examples:

- Phototropic movement (light dependent),
- Geotropic movement (gravity dependent),

Chemotropic movement (chemical dependent), Hydrotropic
- movement (water dependent) and Thigmotropic
- movement (touch dependent).

Geotropism

Movement of plant parts in response to earth's gravitational force is known as geotropism/gravitropism.

- Towards gravity - positive geotropism
- Away from gravity - negative geotropism
- Root grows towards gravity and shoot grows away from gravity

Phototropism

Movement of plant parts in response to light is known as phototropism.

- Towards light - positive phototropism
- Away from light - negative phototropism
- Stems move towards light and roots move away from light.

Hydrotropism

Movement of plant parts in response to water or moisture.

- Towards water - positive hydrotropism
- Away from water - negative hydrotropism
- Again, root movement in search of water is positive hydrotropism.

Chemotropism

Movement of plant parts in response to chemical stimuli is known as chemotropism.

- Towards chemical - positive chemotropism
- Away from chemical - negative chemotropism
- The growth of pollen tube towards the ovule is positive chemotropism.

Thigmotropism

Movement of plant parts in response to touch is called as thigmotropism.

- Towards touch - Positive thigmotropism
- Away from touch - negative thigmotropism
- Movement of tendrils around the support is positive thigmotropism.