



BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

PLANT PHYSIOLOGY

Exercise Choose The Correct Answer

1. A big tree falls in a forest its roots are still in contact with the soil. The branches of this

fallen tree straight up. This happens in response to.....

- A. Water and light
- B. Water and minerals
- C. gravity and light
- D. light and gravity

Answer: D



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2. The tropic movement that helps the climbing vines to find a suitable support is.....

A. Phototropism

B. geotropism

C. thigmotropism

D. chemotropism

Answer: C



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3. The chemical reaction occurs during photosynthesis is...

A. CO_2 is reduced and water is oxidized

B. Water is reduced and CO_2 is oxidized

C. both CO_2 and water is oxidized

D. both CO_2 and water are produced

Answer: A



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4. The bending of root of a plant in response to water is called..... .

A. Thigmonasty

B. Phototropism

C. Hydrotropism

D. Photonasty

Answer: C



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5. A growing seedling is kept in the dark room. A burning candle is placed near it for a few days, The tip part of the seedling bends towards the burning candle.

This is an example of

A. chemotropism

B. thigmotropism

C. phototropism

D. geotropism

Answer: C



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6. The root of the plant is

(i) positively phototropic but negatively geotropic

(ii) positively geotropic but negatively phototropic

(iii) negatively phototropic but positively hydrotropic

(iv) negatively hydrotropic but positively phototropic

A. (i) and (ii)

B. (ii) and (iii)

C. (iii) and (iv)

D. (i) and (iv)

Answer: B



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7. The non-directional movement of a plant part in response to temperature is called.....

A. themotropism

B. thermonasty

C. chemotropism

D. thingmonasty

Answer: B



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8. Chlorophyll in a leaf is required for.....

A. photosynthesis

B. transpiration

C. tropic movement

D. nastic movement

Answer: A



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9. A plant is kept in a dark room for about 24 hours before conducting any experiment on photosynthesis in order to

- A. remove chlorophyll from the leaf
- B. remove starch from the leaves
- C. ensure that photosynthesis occurred
- D. to prove transpiration

Answer: B



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10. Transpiration takes place through..... .

- A. fruit

B. seed

C. flower

D. stomata

Answer: D



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Exercise True Or False

1. The response of a plant part to the chemical stimulus is called phototropism.



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2. Shoot is positively phototropic and negatively geotropic.



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3. When the weather is hot water evaporates lesser which is due to opening of stomata.



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4. Photosynthesis produces glucose and carbon dioxide .



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5. Photosynthesis is important is releasing oxygen to keep the atmosphere in balance.



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6. Plants lose water when the stomata on leaves are closed.



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Exercise Fill In The Blanks

1. The shoot system grows upward in response to



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2. is positively hydrotropic as well as positively geotropic.



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3. The green pigment present in the plant is
.....



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4. The solar tracking of sunflower in accordance with the path of sun is due to



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5. The response of a plant part towards gravity is



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6. Plants take in carbon dioxide for photosynthesis but need for their living.



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Exercise Match Column A With Column B

1. Match column A with column B.

	Column A	Column B
1.	Roots growing downwards into soil	(a) Positive phototropism
2.	Shoots growing towards the light	(b) Negative geotropism
3.	Shoots growing upward	(c) Negative phototropism
4.	Roots growing downwards away from light	(d) Positive geotropism



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2. Match the following columns

S.No.	Column A	Column B	Column C
1.	Photonasty	Response to temperature	<i>Tulipa sp</i>
2.	Thigmonasty	Response to light	<i>Mimosa pudica</i>
3.	Thermonasty	Response to touch	Moon flower



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Exercise Answer The Following In One Or Two Sentences

1. What are Nastic movements?



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2. Name the plant part

(a) Which bends in the direction of gravity but away from the light.

(b) Which bends towards light but away from the force of gravity.



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3. Differentiate phototropism from photonasty.



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4. Photosynthesis converts energy X into energy Y.

(a) What are X and Y ?

(b) Green plants are autotrophic in their mode of nutrition. Why?



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5. Define transpiration.



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6. Name the cell that surrounds the stoma.



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Exercise Short Answers Questions

1. Give the technical terms for the following:

(a) Growth dependent movement in plants.

(b) Growth independent movement in plants.

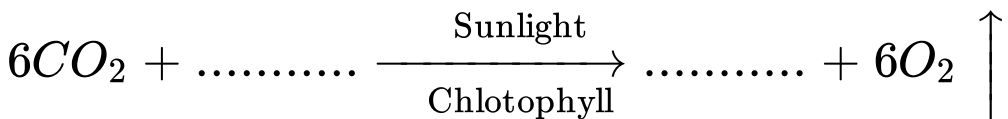


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2. Explain the movement seen in Pneumatophores of Avicennia.

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3. Fill in the blanks :



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4. What is chlorophyll?





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5. Name the part of plant which shows positive geotropism. Why?



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6. What is the difference between movement of flower in sunflower plant and closing of the leaves in the Mimosa pudica?



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7. Suppose you have a rose plant growing in a pot, how will you demonstrate transpiration in it ?



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8. In the given photosynthetic experiment, what will happen to the leaf closed with black paper in starch test? Why?



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9. Mention the differences between stomatal and lenticular transpiration.



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10. To which directional stimuli do

(a) roots respond

(b) shoots respond?



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[Exercise Long Answers Questions](#)

1. Differentiate between tropic and nastic movements



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2. How will you differentiate the different types of transpiration?



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Additional Questions Choose The Correct Answer

1. In response to light, the Auxin..... the cells of a stem. So that the plant bends towards the light

A. condenses

B. solidifies

C. moves

D. elongates

Answer: D



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2. The end products of Photosynthesis is ,
which will be converted into

A. Nitrogen, Amino acids

B. Glucose, Starch

C. Vitamins, Minerals

D. Fats, Fatty acids

Answer: B



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3. The green leaves, in the presence of light , which manufacture Starch, after removing the chlorophyll, if Iodine is added, the leaves turn into.....

A. Blue black

B. Blue orange

C. Black White

D. Blue violet

Answer: A



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4. During respiration plants inhale..... And exhale

A. Nitrogen and Oxygen

B. Oxygen and Hydrogen

C. Oxygen and Carbon dioxide

D. Carbon dioxide and Oxygen

Answer: C



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Additional Questions Fill In The Blanks

1. The plants respond to gravity and are termed as



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2. One of the plant hormones is



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3. is evolved during photosynthesis.



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4. The dead plants and animals are decomposed by



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5. The first leaf of monocot plants is called

.



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6. The plumule is covered by a protective sheath called



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7. The other name for Geotropism is



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8. The other name for thigmonasty is



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9. The proces of Will not take place in green plants at night.



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10. During fertilization, pollen tube grows down the style, in response to the sugars, in

the style is an example of



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Additional Questions Match The Column A With The Column B

Column A

1. Embryonic shoot
2. Minerals needed in substantial quantities
3. Tiny holes in leaves
4. Primary producers
5. Minerals needed in minute

1. quantities.

Column B

- (a) Micronutrients
- (b) Plants
- (c) Plumule
- (d) Macronutrients
- (e) Stomata



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Additional Questions Answer The Following

1. Name the four important things needed by plants for photosynthesis.



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2. Why is transpiration called as " necessary evil "?



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3. What is a food chain?



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4. How are photosynthesis by plants and gas exchange by animals interrelated ?



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5. What are Nastic movements?



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