

Name :

Form :

1.9 STIMULI AND RESPONSES IN PLANTS

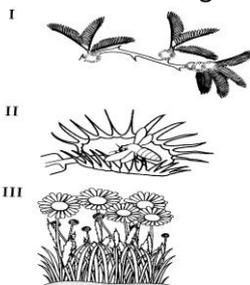
1. The diagram below shows a plant with thigmotropic response.



This response help the plant to...

- I get support
 - II get water
 - III obtain sunlight
- A. I and II C. II and III
 B. I and III D. I, II and III

2. Which of the following show response to touch?



- A. I and II C. II and III
 B. I and III D. I, II and III

3. The information below shows the functions of the responses of plants.

- To gain water in the soil
- To gain mineral salts in the soil
- To get support

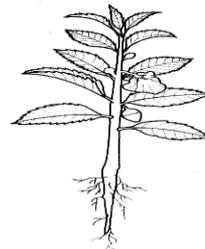
Which of the following responses is not related with the functions above?

- A. Positive thigmotropism
 B. Positive geotropism
 C. Nastic movement
 D. Positive hydrotropism

4. What are the stimuli that cause the shoots to grow upwards and the roots downwards?

	Shoots	Roots
A	Sunlight	Gravity
B	Sunlight	Water
C	Water	Gravity
D	Gravity	Sunlight

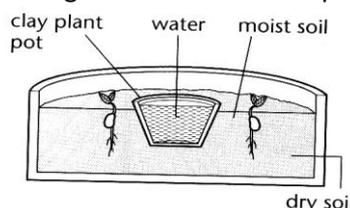
5. The diagram shows a plant



The plant shows the following responses, except....

- A. Geotropism
 B. Phototropism
 C. Hydrotropism
 D. Thigmotropism

6. The diagram shows the set-up of an experiment.



The aim of this experiment is to show the response in plants to...

- A. Sunlight C. Gravity
 B. Water D. touch

7. The roots of the plants show...

- I Positive geotropism
 - II negative phototropism
 - III positive hydrotropism
- A. I and II C. II and III
 B. I and III D. I, II and III

8. Which of the following responses shows phototropism?

- A. the leaves of venus flytrap close when a fly lands on them
 B. Banana leaves roll up on a hot day
 C. The plants shoots grow towards light
 D. The leaves of Mimosa close on touching them.

9. The shoots of seeding show...

- A. Positive phototropism and positive geotropism
 B. Positive phototropism and negative geotropism
 C. Positive geotropism and positive hydrotropism
 D. negative hydrotropism and negative phototropism

10. The table below shows a tropism and the stimulus involved

Type of tropism	stimulus
Geotropism	X
Phototropism	Y
Hydrotropism	Z

Which of the following represents X, Y and Z?

	X	Y	Z
A	Gravity	Light	Water
B	Light	Gravity	Water
C	Water	Light	Gravity
D	Light	Water	gravity

11. The tendrils of cucumber plants shows..

- A. thigmotropism
- B. Positive geotropism
- C. Positive hydrotropism
- D. negative phototropism

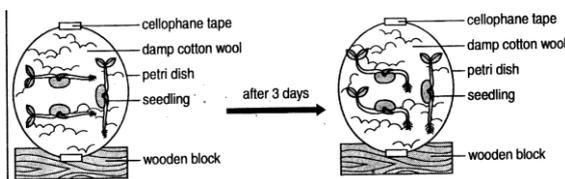
12. Which of the following plants show nastic movement?

- I Rafflesia sp.
 - II Mimosa pudica
 - III Venus fly trap
- A. I and II C. II and III
 B. I and III D. I, II and III

13. Tropism is the response of plants to stimuli. Which of the following tropisms and their importance are correctly paired?

	Tropism	Important
I	phototropism	Help carry out photosynthesis
II	Hydrotropism	Helps absorb water and mineral salts
III	Thigmotropism	Enable the plants to obtain sunlight

14. Diagram shows an experiment carried out to study the response of a plant.



Based on the diagram, what is the conclusion of the experiment?

- A. The roots show positive geotropism
- B. The roots show positive phototropism

- C. The shoots show negative phototropism
- D. The shoots positive hydrotropism

15.

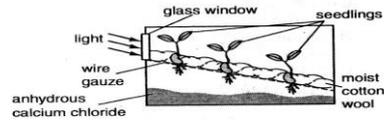


Diagram shows an experiment to study tropism. Which of the following are the conclusion based on the above experiment?

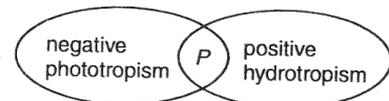
- I the roots show positive hydrotropism
 - II the shoots show positive phototropism
 - III the roots shows positive geotropism
- A. I and II C. II and III
 B. I and III D. I, II and III

16. Which of following plants shows the same response as the plant in the diagram?



- A. Hibiscus plant
- B. Pitcher plant
- C. Bougainvillea plant
- D. Morning glory plant

17.



Based on the diagram, which of the following parts of the plant can be represented by P?

- A. Roots C. Stems
- B. Shoots D. Leaves

18. The information above shows the response of a plant due to a stimulus.

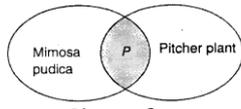
- Shoots grow away from the stimulus
- Roots grow towards gravitational pull
- Enables the plant to obtain water and minerals

Based on the above information, which is the correct response of a plant due to a stimulus?

- A. Geotropism C. Phototropism
- B. Hydrotropism D. thigmotropism

19. Why is the process of phototropism important to plants?
- A. flowers can bloom earlier
 - B. plants can carry out the process of transpiration.
 - C. green leaves can carry out photosynthesis
 - D. the roots can absorb water and mineral salts from the soil.

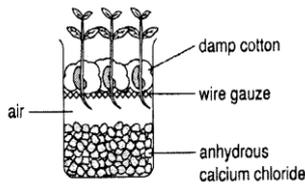
20. Based on diagram, both the plants respond to a particular stimulus



Process P shows

- A. Hydrotropism
- B. Phototropism
- C. Thigmotropism
- D. Nastic movement

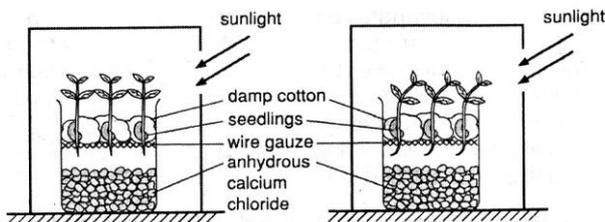
21.



What type of response is shown by the roots of the seedlings?

- A. Negative geotropism
- B. Positive hydrotropism
- C. Positive phototropism
- D. Negative thigmotropism

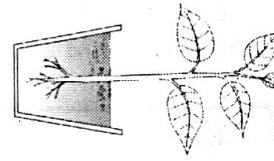
22. Diagram shows the arrangement of apparatus to study the tropism responses of the roots and shoots of seedlings.



Based on the movement of roots and shoots of the seedlings at the end of the experiment, which is correct?

	Shoots		Roots	
	phototropism	hydrotropism	phototropism	hydrotropism
A	Positive	Negative	Negative	Positive
B	Positive	Negative	Positive	Negative
C	Negative	Positive	Negative	Positive
D	Negative	Positive	Positive	Negative

23. A plant was placed outside the laboratory as shown in the diagram..



What do you think will happen after one week?

- I. The roots of the plant will bend downwards
 - II. The shoots of the plant will grow upwards
 - III. The roots and shoots of the plant will not bend at all
- A. I and II
 - B. I and III
 - C. II and III
 - D. I, II and III