

**PREVIOUS QUESTIONS XI 2012-2022 : Chapter 11 - Plant Growth and Development****1Mark Questions**

- Based on the relationship fill in the blanks.
  - Cell division : Cytokinin  
Bolting : \_\_\_\_\_
  - Euglena : Protista  
Mycoplasma : \_\_\_\_\_ (Chapter 1) 2012 Imp.
- Suggest the correct scientific term for the following:
  - Flowering on exposure to low temperature
  - Algal partner in lichen (Chapter 1) 2012 Imp.
- By observing the relationship of the first pair, fill in the blanks of the second pair.
  - F.W.Went : Auxins : :  
E.Kurosawa : ..... 2014 March
  - Auxins : Apical dominance : :  
.....: Overcome apical dominance. 2014 March
- In certain plants, a tolerance to various kinds of stresses such as severe drought can be overcome by the production of a hormone. Name this hormone. 2014 Imp.
- Who among the following scientists is related with the identification of cytokinins?
  - E.Kurosawa
  - F.Skoog
  - C.Darwin
  - F.W.Went 2017 March
- A simple gaseous Plant Growth Regulator (PGR) is..... 2019 Imp.
- Choose the only one growth inhibiting plant hormone among the following options:
  - ABA
  - NAA
  - IAA
  - 2,4-D 2020 Model
- Name the plant hormone known as 'Stress hormone'. 2021 Model
- Name the plant hormone which helps to the ripening of fruits. 2021 Sept.
- Name a gaseous plant hormone. 2021 Imp.

**2 Marks Questions**

- Artificial phytohormones are widely used in agriculture.
  - Name any two artificial phytohormones
  - Mention their importance in agriculture 2012 Imp.
- Match the following:
 

a) Auxin	i) Fruit ripening
b) Gibberellins	ii) Stomatal closure
c) Cytokinins	iii) Root initiation
d) Ethylene	iv) Bolting
	v) Overcome apical dominance

 2013 March
- Which one of the plant growth regulators would you use if you are asked to do the following processes?
  - Induce parthenocarpy
  - Quickly ripen a fruit
  - Induce immediate stomatal closure in leaves
  - To increase the length of grape stalks 2014 March
- Observe the graph:
 

The graph represents the different phases of growth. Name the growth curve and identify the different phases of growth represented in the diagram as (a), (b) and (c) 2014 Imp.
- Auxin and Gibberellins are two important growth hormones that control plant growth. Write any two important functions of each of these hormones. 2016 Imp.
- Write any four agricultural applications of ethylene. 2017 March
- Ethylene is a gaseous hormone. Describe its four different actions in plants. 2017 Imp.
- Write a note on the phenomenon plasticity exhibited by plants with an example. 2018 March

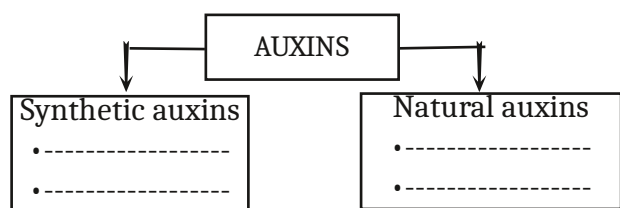
**PREVIOUS QUESTIONS XI 2012-2022 : Chapter 11 - Plant Growth and Development**

9. Analyse the table and fill in the blanks labelled as A and B.

Differentiation	_____ A _____
_____ B _____	Differentiated cell which have lost capacity to divide, regain the capacity of division

2019 Model

10. Draw the given flow chart in your answer sheet. Fill the blank columns.



2019 Imp.

11. Many plants show plasticity during their lifespan.

- (a) What is plasticity?  
(b) Give one example.

2019 Imp.

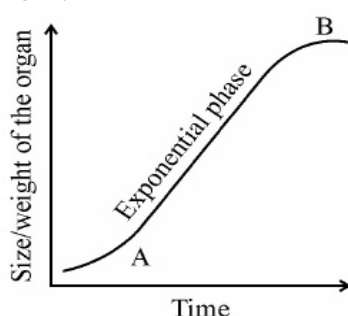
12. Ethylene is one of the most widely used Plant Growth Regulator in Agriculture. Write any two agricultural applications of ethylene.

2020 Model

13. (a) Write the name of the growth curve seen in the given figure.

- (b) Write the name of phases marked as A and B.

2021 Model



14. Sigmoid curve of growth is a characteristic of living organism growing in natural environment. Write any two phases seen in sigmoid growth curve.

2021 Sept.

15. Write any two reasons for seed dormancy?

2021 Imp.

16. Write any two factors for seed dormancy?

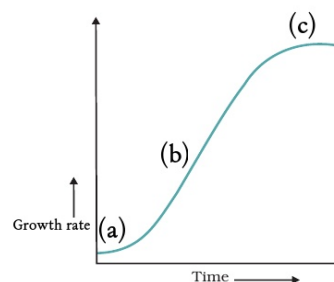
2022 Model

17. Differentiate between long day plants and short day plants.

2022 June

**3 Marks Questions**

1. Given below is the growth curve of a plant. Observe it and answer the questions.



- a) Name the growth curve  
b) Label (a) and (c) phases of growth in the growth curve  
c) When the tip of cassava plant is lost, a number of lateral branches grow from the nodes below.

Explain this phenomenon and specify the hormone responsible for this.

2012 March

2. Given are certain physiological effects. Name the plant hormones responsible for them.

- a) Increase in stem length  
b) Apical dominance  
c) Closure of stomata  
d) Ripening of fruits  
e) Bolting  
f) Active cell division

2013 Imp.

3. Apical dominance and bolting are two physiological phenomena shown by the plants due to the activity of two growth regulators.

- i) The growth regulators concerned are;  
a) Apical dominance : .....  
b) Bolting : .....  
ii) Distinguish between the two phenomena.

2015 March

4. Match the following:

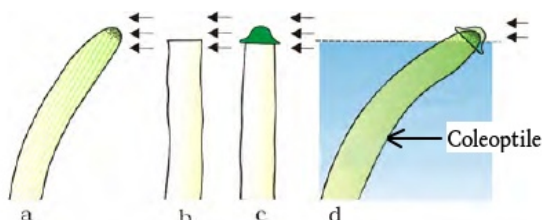
A	B
a) Auxin	i) Delay of leaf senescence
b) Gibberellin	ii) Promotes senescence
c) Cytokinins	iii) Promotes bolting
	iv) Apical dominance

2015 Imp.

**PREVIOUS QUESTIONS XI 2012-2022 : Chapter 11 - Plant Growth and Development**

5. a) Identify the odd one from the given list of plant growth regulators.  
       i) ABA                ii) NAA  
       iii) IAA            iv) IBA  
 b) List some physiological responses of gibberellins in plants. 2016 March

6. Observe the figure given below:



- a) Source of which plant hormone is indicated in the figure?  
 b) Write four roles of above identified hormone. 2018 Model
7. Plant growth regulators can be employed for various agricultural and horticultural practices. Identify the growth regulators that can be used for the following purposes.

- To have weedfree lawns
- To increase sugarcane length
- Fruitset in pineapples
- Rooting in stem cuttings
- Inhibiting seed germination
- To promote female flowers in cucumber

2018 March

8. There are certain seeds which fails to germinate even under favourable external conditions. This is called seed dormancy.  
 a) State any two reasons for seed dormancy.  
 b) Suggest two manmade measures for breaking seed dormancy. 2018 Imp.

9. Plant growth regulators perform various functions in plant body.  
 a) Name the hormones responsible for apical dominance and bolting. Define the phenomena.  
 b) Which plant hormone is referred to as an antagonist to gibberellic acid? 2019 March

10. Some plants require a periodic exposure to light to induce flowering :  
 (a) Name the phenomenon.  
 (b) How can we classify plants on the basis of this phenomenon ?  
 (c) The site of perception of light/dark duration for flowering in plants is ..... 2019 Model

11. The plant growth regulators are divided into growth promoters and growth inhibitors  
 (a) Name the three hormones, which are known as plant growth promoters.  
 (b) Name the growth inhibitor which is known as stress hormone.  
 (c) Write any two roles of the above identified stress hormone. 2020 March

12. Given below are the names of three plant growth promoters. Write their main functions.  
 (a) Auxin  
 (b) Gibberellin  
 (c) Cytokinin 2020 Imp.

13. (a) Write the name of plant hormone responsible for ripening of fruits.  
 (b) Write any two other functions of this hormone. 2021 Model

14. The various functions of plant growth regulators are given below. Arrange them under suitable columns in the table provided.  
 (i) Internode elongation of sugarcane.  
 (ii) Promotes cell division.  
 (iii) Bolting  
 (iv) Apical dominance  
 (v) Initiate rooting in stem cutting  
 (vi) Overcome apical dominance

	Name of Plant growth regulators	Functions	
1.	Auxin	(a)	_____
		(b)	_____
2.	Giberelline	(c)	_____
		(d)	_____
3.	Cytokinin	(e)	_____
		(f)	_____

2021 Sept.

**PREVIOUS QUESTIONS XI 2012-2022 : Chapter 11 - Plant Growth and Development**

15. Plant growth regulators play important roles in growth promoting and inhibiting activities.

- (a) Which hormone is known as stress hormone ?
- (b) Name the hormone which is responsible for the phenomenon called bolting in rosette plants ?
- (c) Which hormone plays role in apical dominance of plants ? 2021 Imp.

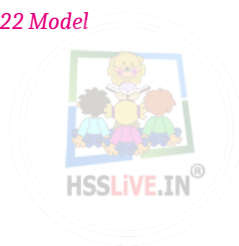
16. The functions of different Plant Growth Regulators (PGR) are given.

Arrange them into respective columns.

- apical dominance
- bolting
- delay leaf senescence
- rooting of stem cutting
- overcome apical dominance
- increases the length of the stem

Auxin	Gibberellin	Cytokinin
•	•	•
•	•	•

2022 Model



17. Given below are certain activities of growth regulators in plants. Arrange them under suitable heading in the table provided.

- Initiate rooting in stem cuttings.
- Bolting in rosette plants.
- Apical dominance.
- Increase length of grape stalks
- Parthenocarpy in tomatoes.
- Speed up malting process in brewing industry

Auxin	Gibberellin
•	•
•	•
•	•

2022 June