NEET : CHAPTER WISE TEST-13

SUBJECT :- BIOLOGY **DATE.....**
CLASS :- 11th **NAME.....**
CHAPTER :- PLANT GROWTH IN HIGHER PLANT **SECTION.....**

(SECTION-A)

1. Growth can be measured in various ways. Which of these as be used as parameters to measure growth?
(A) Increase in cell number
(B) Increase in cell size
(C) Increase in surface area
(D) All of the above

2. After meiotic division in a cell, if one daughter cell continues to divide, while the other differentiate and matures, then this type of growth is mathematically expressed as
(A) $W_1 = W_0e^{rt}$ (B) $L_0=L_t + rt$
(C) $W_0=W_1e^{rt}$ (D) $L_t = L_0 + rt$

3. Typical growth curve in plants is
(A) Parabolic
(B) Sigmoid
(C) Linear
(D) Stair/steps shaped

4. Geometric and arithmetic growths are well observed in the development of
(A) Embryo (B) Fruit
(C) Flower (D) Leaf

5. Plant follows different pathways in response to environment or phases of life to form different kinds of structures. This ability is
(A) Expansion (B) Plasticity
(C) Differentiation (D) Senescence

6. Most of the tissues and cell types represent
(A) Division phase
(B) Elongation phase
(C) Enlargement Phase
(D) Maturation phase

7. Development is controlled by
(A) Phytochromes only
(B) Intrinsic factor only
(C) Inter cellular, genetic, and environmental factors
(D) Intracellular factors only

8. Growth and differentiation in plants is
(A) Closed and open
(B) Open and open
(C) Open and closed
(D) Closed and closed

9. Zygotic divisions initially
(A) Show geometric growth
(B) Can be expressed by a straight line
(C) Show a pattern where every cell divides including all the daughter cell
(D) All except (B)

10. How many of the following are the products of redifferentiation?

phellogen, phellem, phelloderm, interfascicular cambium, secondary xylem, secondary phloem, primary xylem, procambium, complementary cells

(A) Three (B) Five
(C) Four (D) Six

11. Steps involved in the course of seed germination are
(a) Emergence of radicle
(b) Hypocotyl straightens
(c) Imbibition of water
(d) Formation of hypocotyl hook
(A) (c) → (a) → (d) → (b)
(B) (a) → (c) → (b) → (d)
(C) (c)→ (a) → (d) → (b)
(D) (d) → (b) → (a) → (e)

12. Formation of phellogen from parenchyma cells is
(A) Differentiation
(B) Accretion
(C) Dedifferentiation
(D) Redifferentiation

13. Development is considered as the sum of
(A) Growth and senescence
(B) Expansion and cell division
(C) Growth and differentiation
(D) Growth and cell division

14. Auxanometer is used to detect
(A) Respiration rate
(B) Plant growth
(C) Transpiration rate
(D) Size of stomatal aperture

15. Find the correct match.
(A) Auxin--F. W. Went
(B) GA-Miller et. al.
(C) ABA-Antiaging hormone
(D) Ethylene Carotene derivative

16. Phototropic and geotropic response toward the source of stimulus in shoot and root tips, respectively, is due to
(A) Auxins (B) Cytokinins
(C) Diberyllium (D) Abscisic and

17. Go through the following matches with respect to PGRS and its derivatives.

	PGR	Derivatives
(a)	Auxin	Indole compounds
(b)	Gibberellins	Terpene derivatives
(c)	Cytokinin	N^6-furfuryl aminopurine
(d)	Abscisic acid	Carotenoid derivatives

Select the correctly matched pair.
(A) Only (a) and (b)
(B) Only (a), (b), and (c)
(C) Only (b) and (c)
(D) All (a), (b), (c), and (d)

18. Cell division-promoting hormone that cannot be found in plants is
(A) IPA (B) Zeatin
(C) BAP (D) Kinetin

19. First isolated cytokinin of plant origin is
(A) Kinetin
(B) No-furfuryl aminopurine
(C) Zeatin
(D) Abscission II

20. How many of the following terms are associated with stress hormone?

Terpene derivative, dormin, bolting, Richmond-Lang effect, seed dormancy, anti-GA, break dormancy

(A) Three (B) Two
(C) Five (D) Four

21. Which one is the precursor of ethylene?
(A) Methionine (B) Tryptophan
(C) Xanthophyll (D) Acetyl co-A

22. Auxins that have been isolated from plants are
(A) IAA and NAA
(B) IAA and IBA
(C) NAA and 2,4-D
(D) All of the above

23. Which of the following plant hormones is not acidic is nature?
(A) Auxin (B) Cytokinin
(C) ABA (D) Gibberellin

24. The most widely used PGR in agriculture is characterized by
(A) Promotes abscission in flower and fruits
(B) Initiates germination in peanut seeds
(C) Increases the rate of respiration
(D) All of the above

25. Ethylene is not directly applied in the field as a gas due to its high diffusion rate. Which compound is used to overcome this limitation?
(A) 2,4-D (B) Dormin
(C) Ethephon (D) Benzaldehyde

26. Find the incorrectly matched pair.
(A) Auxin-Promotes flowering in pineapple
(B) Gibberellins-Foolish seedling disease of rice
(C) Ethylene-Promotes female flowers in cucumber
(D) Cytokinin-Promotes apical dominance

27. Richmond-Lang effect is due to
(A) Indole compound
(B) Cytokinin
(C) Abscission
(D) Dormin

28. Read the following statements:
(i) It is used to prepare weed-free lawn.
(ii) It promotes the abscission of older mature leaves and fruits.
The above functions are carried out by
(A) Auxin (B) Gibberellin
(C) Cytokinin (D) ABA

29. Which of the following does not fall under the triple action of ethylene?
(A) Horizonal growth of seedling
(B) Prevent geotropism
(C) Swelling of stem
(D) Fruit response

30. Choose the odd one out with respect to the function performed by following hormones.

	Cytokinin	ABA
(A)	Stomatal opening	Stomatal closure
(B)	Delay senescence	Promote senescence
(C)	Induce seed dormancy	Break seed dormancy
(D)	Chloroplast formation	Destruction of chlorophyll

31. Apical bud inhibits the growth of lateral buds. This effect can be counteracted by
(A) Auxin application
(B) Spraying auxin in root
(C) The application of 2,4-D
(D) Cytokinin application

32. Most common and more active cytokinin is
(A) BAP (B) IPA
(C) Kinetic (D) Zeatin

33. Bushy habit in plants results from
(A) Girdling (B) Defoliation
(C) Pruning (D) Layering

34. Richmond-Lang effect is related with
(A) Substitution of cold treatment
(B) Photoperiodism
(C) Delaying senescence
(D) Feminizing effect

35. Select the correct option stating true (T) and false (F).
A. Removal of apical bud of a flowering plant leads to early flowering.
B. Brassinosteroids are PGR involved in the pollen germination and pollen tube elongation.
C. Jasmonic acid and salicylic acids are growth regulators of plants.
D. The discovery of each of the major group of PGRS has been accidental.
(A) A—T; B—F; C—F; D—T
(B) A—F; B —T; C—T; D—T
(C) A—F; B—T; C—T; D—F
(D) A —T; B—F; C—F; D—F

(SECTION-B)

36. A PGR that can fit in both the categories, that is, growth promoters and inhibitors, is
(A) Abscisic acid (B) Ethylene
(C) Kinetin (D) Dormin

37. Kinetin was first discovered as a breakdown product of
(A) DNA (B) t-RNA
(C) Spindle fiber (D) Protein

38. PGR which is believed to be involved in phloem transport is
(A) Cytokinin (B) NAA
(C) GAS (D) ABA

39. Find the incorrect statement with respect to growth.
(A) Plant growth is determinate.
(B) It is the most fundamental and conspicuous characteristic of a living being.
(C) Growth is measurable.
(D) In open form of growth, new cells are always being added.

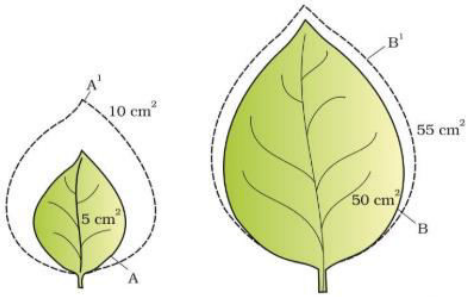
40. Read the following statements, and select the correct option.
A. Growth is accompanied by metabolic processes that occur at the expense of energy.
B. When the rate of catabolism exceeds the rate of anabolism, growth occurs.
(A) Only (A) is incorrect.
(B) Only (B) is incorrect.
(C) Both (A) and (B) are incorrect.
(D) Both (A) and (B) are correct.

41. The period of growth is generally divided into three phases, namely, meristematic, elongation and maturation. Identify the regions on the basis of following features:
A. Cells increase in number and so does the size of vacuoles and new cell wall deposition.
B. Cells are rich in protoplasm, large conspicuous nucleus, thin cellulosic cell wall with plasmodesmata connections.
C. Cells attain their maximum sizes in terms of wall thickening and protoplasmic modification.
(A) A-Maturation; B-Elongation; C-Meristematic
(B) A-Elongation; B-Meristematic; C-Maturation
(C) A-Elongation; B-Maturation; C-Meristematic
(D) A-Maturation; B-Meristematic; C-Elongation

42. The given image represents
(A) Arithmetic growth as shown during differentiation of embryo
(B) Geometric growth as shown during morphogenesis and differentiation in embryo
(C) Geometric growth as shown during the initial phase of embryogenesis
(D) It will be represented by a straight line when plotted against time

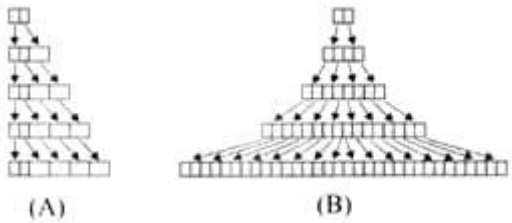
43. A plot length (L) against time (t) gives constant linear growth in
(A) Elongation root
(B) Geometric growth
(C) Early embryonic stages
(D) All except (A)

44. Choose the correct option for the given image.



(A) Relative growth of leaf B is higher than leaf A.
(B) Relative growth of leaves A and B is the same.
(C) Absolute growth of leaf A is higher than leaf B.
(D) Absolute growth is same in both leaves

45. In the given figure, identity the type of growth phase in A and B, and select the correct option.



(A) A-Arithmetic growth; B-Geometric growth
(B) A-Geometric growth; B-Arithmetic growth
(C) A-Geometric growth; B-Exponential growth
(D) A-Arithmetic growth; B-Arithmetic growth

46. Select the correct option to fill up the blank in following statements:
(i) A was isolated by B from the tips of coleoptiles of C
(ii) D identified and crystallized the cytokinesis-promoting substance that was termed kinetin.
(A) A-Cytokinin; B-Miller; C-Oat seedling; D Cousins
(B) A-Auxin; B-Francis Darwin; C-Canary grass; D-Skoog and Miller
(C) A-Auxin; B-F. W. Went; C-Oat seedling; D- Skoog and Miller
(D) A– Gibberellin; B – F Kuroswa; C – Maize seedling; D – Charles Darwin

47. Match the following.
Column I
(a) IAA
(a) GA
(a) Cytokinin
(a) Ethylene
Column II
(i) Overcoming genetic dwarfing
(ii) Most widely used PGR inagriculture
(iii) Induced parthenocarpy intomato
(iv) Coconut milk factor
(A) a(iii) , b(i), c(iv), d(ii)
(B) a(i), b(iii), c(iv) d(ii)
(C) a(iii), b(iv), c(i), d(ii)
(D) a(iv), b(iii) c(iv) d(iii)

48. The hormone which was discovered through "foolish seeding disease" of rice is
(A) Indole 3-acetic acid
(B) Ethylene
(C) Gibberellin
(D) Kinetin

49. Bioassay of auxin is
(A) Avena curvature test
(B) Triple action test
(C) Tobacco pith culture test
(D) Dwarf maize test

50. A plant hormone used for inducing morphogenesis in plant tissue culture is
(A) Abscisic acid (B) Gibberellins
(C) Cytokinin (D) Ethylene