Growth Regulators

1. **Development of the plant is the result of**

   1. Growth and differentiation
   2. Metabolic activity
   3. Irreversible change in the form
   4. Effect of environmental change

2. **Swelling of a piece of a wood when placed in water is**

   1. Growth
   2. Development
   3. Imbibitions
   4. Differentiation

3. **Metabolic process involving synthesis of macromolecules using metabolic energy is called as**

   1. Differentiation
   2. Growth
   3. Development
   4. Assimilation

4. **True statement regarding growth is**

   1. Primary growth in plants is mostly elongation of plant along their axis
   2. Growth accompanies no metabolic activity
   3. In plants, meristems ceases to divide after some time.
   4. Growth results in the formation of organs like leaf and roots.

5. **Assertion (A): Stems in dicots and gymnosperms increase in thickness later in life**

   Reason(R): Lateral meristems form later in life in these plants

   1) Both A and R are true and R is the correct explanation of A.
   2) Both A and R are true but R is not the correct explanation of A.
   3) A is true, R is false
   4) A is false, R is true

6. **Open form of growth is**

   1. Increase in length
   2. Increase in girth
   3. Increase in both length and thickness
   4. Indefinite activity of the meristems

7. **True statement among the following**

   I. Meristematic cells show abundant plasmodesmata

   II. The cells that loses capacity to divide develops vacuolation.

   III. At the root apex cell grow geometrically

   IV. Growth rate is constant in a plant species.

   1. I & II
   2. II & III
   3. I, II & III
   4. III & IV

8. **Graphical representation of increase in length of the plant against time will be**

   1. Sigmoid curve   2. Linear

   3. Parabola   4. Stationary after primary increase

9. **In a week time, a leaf increases 5 times in its surface area. If initial surface area is 4.5 cm^2 the growth rate is**

   1) 7.714 cm^2 2) 22.5 cm^2 3) 20.25 cm^2 4) 3.214 cm^2

10. **The growth curve shown in trees with seasonal activities**

    1. Stationary phase from the beginning   2. Sigmoid curve

    3. Linear growth rate   4. Parabolic

11. **The exponential growth can be expressed as**

    1. $W = W_1^2$ 2. $W_1 = W_0 + rt$ 3. $W_1 = W_0^{rt}$ 4. $W_1 = W_0 e^{rt}$

12. **Measurement and comparison of the total growth per unit time is**

    1. Growth rate   2. Absolute growth rate

    3. Relative growth rate   4. Exponential growth rate

13. **A leaf of 15 grams increased to 100 grams in 10 days before falling off. The relative growth rate is**

    1. 8.5 grams   2. 10 grams   3. 85 grams   4. 22.5 grams

14. **Conditions not essential for growth in plants is**

    1. Water status of the plant   2. Nutrients

    3. Oxygen availability   4. Hormones

15. **Process involving in the establishment of localized differences in biochemical, metabolic and structural organization is called as**

    1. Growth   2. Redifferentiation   3. Dedifferentiation   4. Differentiation

16. **Ability to form different structural features in response to environment is called as**

    1. Stimulation   2. Differentiation

    3. Plasticity   4. Adaptation

17. **Growth retarders are**

    A. Auxin   B. Gibberellin   C. Cytokinin   D. Ethylene   E. ABA

    1. A & B   2. B & C   3. C & D   4. D & F

18. **Hormone, added in addition to auxin, responsible for callus growth in tobacco pith is discovered by**

    1. Kurosawa   2. Skoog   3. Went   4. Darwin

19. **Terpenes are the structural features of**

1. Auxins   2. Gibberellin

3. Gibberellin & ABA   4. Cytokinin

20. **Assertion (A): Decapitated coleoptiles will not respond to unilateral light**

Reason(R):Source of auxins is removed by decapitation

1) Both A and R are true and R is the correct explanation of A.

2) Both A and R are true but R is not the correct explanation of A.

3) A is true, R is false

4) A is false, R is true

21. **Synthetic auxins among the following are**

I. IAA   II. IBA   III. 2,4-D   IV. NAA

1. I & II   2. II & III   3. III & IV   4. IV & I

22. **True statement regarding plant growth regulators**

1. They are produced only by the plant cells

2. All plant growth regulators promote differentiation

3. All of them are complex organic substances

4. They can be produced by every living cell of the plant

23. **False statement regarding auxin activity**

1. It suppresses the axillary bud development   2. Auxins indices parthenocarpy

3. It initiates root growth   4. It promotes abscission

24. **Delay in senescence is encouraged by**

I. Auxins   II. Cytokinins   III. ABA   IV. GA

1. I & II   2. II & IV   3. II & III   4. I & IV

25. **Internode elongation is due to**

1. GA   2. ABA   3. IBA   4. Cytokinin

26. **Weedicide among the following is**

1. IAA   2. NAA   3. 2,4-D   4. IBA

27. **In brewing industry GA_3 is used in**

1. Increasing alcohol concentration

2. Fermentation of carbohydrates

3. Production of malt

4. Flavour enhancer

28. **Substances that are not present in plants are**

A. Kinetin   B. Zeatin   C. Dormin   D. NAA

1. A & C   2. C & D   3. A & D   4. A & B

29. **Match the following**

List - A   **List- B**

1) Internode elongation   I : Gibberellic acid

2) Xylem differentiation   II: Gibberellin

3) Improve apple shape   III: Ethylene

4) Production of new leaves   IV: Auxin

V: Cytokinin

	A	B	C	D		A	B	C	D
1)	I	IV	III	V	2)	II	IV	I	V
3)	II	V	III	I	4)	I	II	IV	III

30. **Assertion (A):Spraying sugar cane with GA will increases tonnage yield**

Reason(R):GA increases internode elongation

1) Both A and R are true and R is the correct explanation of A.

2) Both A and R are true but R is not the correct explanation of A.

3) A is true, R is false

4) A is false, R is true

31. **Length of the axis is increased by**

1. GA_3 2. Ethylene   3. Cytokine   4. GA_3 & ethylene

32. **Opposing effects of hormones is observed in**

1. Auxins and cytokinins in apical dominance

2. Ethylene and ABA regarding dormancy of seed and bud

3. ABA and GA in inhibiting seed germination

4. All the above

33. **Stress hormone is**

1. IAA   2. ABA   3.GA   4. Ethylene

34. **Young fruit produces**

1. Cytokinin   2. Ethylene   3. Auxin   4. GA

35. **Climacteric is**

1. Production of flowers after application of GA

2. Increase in root hair growth

3. Increase in respiration during fruit ripening

4. Loss of vertical growth by using ethylene

36. **Immature embryos are responsible for dormancy in**

1. *Delphinium*   2. Butter cup   3. *Polygonum*   4. Tomato

37. **Critical time period for a short day plant (A) is 15 hrs and for a long day plant (B) is 13 hrs. If both plants are exposed to 14 hrs of time then**

1. Only plant A would flower   2. Only plant B would flower

3. Both A and B flowers   4. Both A and B do not flower

38. **Season suitable for planting winter variety of rice is**

1. Winter   2. Spring   3. Summer   4. Autumn

39. **Plant part that can perceive photoperiod is**

1. Flower bud   2. Leaf   3. Stem   4. Apical bud

40. **Scarification method is used to overcome dormancy of seeds with**

1. Hard seed coat   2. Immature embryos

3. Cold requirements   4. Oxygen requirement

Plant Growth Regulators

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	3	2	1	1	4	1	2	4	2	4	2	1	4	4	3	4	2	3	1
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
3	4	1	2	1	3	3	3	2	1	4	4	2	1	3	2	3	4	2	1