

XI th Assignment EIGHT

PLANT GROWTH & DEVELOPMENT + DIGESTION & ABSORPTION

01. Generally growth is defined as

- (1) temporary change in Fresh weight
- (2) temporary change in Dry weight
- (3) permanent change in girth only
- (4) permanent change in length and girth

02. What would happen if the meristem ceases to divide?

- (1) plant grow in girth only
- (2) plant grow in length only
- (3) plant grow in length & girth
- (4) plant growth ceases

03. Adding of new cells always to the plant body by The activity of meristems is called as

- (1) Direct form of growth
- (2) Open form of growth
- (3) closed form of growth
- (4) Indirect form of growth

04. Identify the meristems that causes increase in Girth are

- (A) apical meristems
- (B) Intercalary meristems
- (C) Inter fascicular cambium
- (D) Cork cambium

- (1) AC (2) BC
- (3) CAB (4) CD

05. Identify the correct statements

- (A) Cell of root apical meristem of maize gives More than 17,500 new cells per hour
- (B) Cell of root apical meristem of maize gives more than 17,500 new cells per minute
- (C) Cells in water melon increase in size by upto 3,50,000 times
- (D) Size of cells in water melon decrease in size by Upto 3,50,000 times

- (1) AC (2) BD
- (3) AD (4) AB

06. Character of phase of elongation is

- (1) cell wall is thin and cellulosic
- (2) abundant plasmodesmatal connections
- (3) increased vacuolation of cell
- (4) cell wall becomes very much thickened

07. Growth rate means :

- (1) increased growth per unit area
- (2) increased growth per unit time
- (3) increased growth in total length
- (4) increased growth in total girth

08. Formulae of a growth which can be represented in linear curve is

- (1) $L_1 = L_0 + rt$ (2) $L_0 = L_1 + rt$
- (3) $w_1 = w_0 e^{rt}$ (4) $w_0 = w_1 e^{rt}$

09. In geometric method, if one meristematic cell

divides three times, number of meristematic cells are

- (1) 8 (2) 1
- (3) 4 (4) 2

10. In arithmetic method, if one cell divides, count The number of meristematic cells after three divisions are

- (1) 8 (2) 1
- (3) 4 (4) 2

11. Following external factor provides medium for enzymatic activity

- (1) water (2) oxygen
- (3) nutrients (4) light

12. During growth synthesis of protoplasm mainly requires

- (1) Oxygen (2) CO₂
- (3) Nutrients (4) Light

13. Arithmetic growth means

- (1) Out of two cells formed from one cell only one continuous division
- (2) Out of two cells formed from one cell two to continuous division
- (3) No cell divides and add new cells
- (4) Either 1 (or) 2

14. Identify the correct sequence of phases of sigmoid curve

- (A) Log (B) Lag (C) stationary
- (1) A □ B □ C (2) B □ C □ A
- (3) B □ A □ C (4) C □ B □ A

15. The exponential growth can be expressed as

- (1) $w_1 = w_0 e^{rt}$ (2) $w_0 = w_1 e^{rt}$
- (3) $L_1 = L_0 + rt$ (4) $L_0 = L_1 + rt$

16. The glands near the ears that initiate starch digestion are the

- (1) submaxillaries (2) parotids
- (3) parietals (4) sublingual

17. The opening of food pipe is guarded by

- (1) glottis (2) epiglottis
- (3) frenulum (4) none of these

18. Peristalsis results from activity of tissues in the

- (1) mucosa (2) submucosa
- (3) muscularis (4) serosa layer

19. Which of the following is true regarding cellulose in human diet?

- i. its harmful
 - ii. we can't digest it
 - iii. its an important carbohydrate nutrient
 - iv. it's an important source of fiber.
- (1) i, ii & iii only (2) ii & iv only
 - (2) i & ii only (3) iii & iv only

20. Nerves and blood vessels in teeth are located in the

- (1)pulp (2)enamel
- (3)dentin (4)cementum

21. The opening of the oesophagus into the stomach

- (1) is not regulated
- (2) is regulated by a muscular sphincter
- (3) is regulated by a rigid non-muscular sphincter
- (4) is guarded by a cartilaginous valve

22. Peristalsis movement is

- (1) an involuntary response
- (2) bidirectional
- (3) continuous even if there is no swallowing
- (4) helps in mixing of food and enzymes in oesophagus

23. The rugae in the stomach are modification of

- (1)serosa (2)muscularis
- (3)submucosa (4)mucosa

24. The first segment of the small intestine is called the:

- (1) villus (2) illeum
- (3) colon (4) duodenum

25. Which of the following statements concerning bile is/are correct?

- 1. It decreases the pH of the chyme
- 2. It degrades any alcohol not absorbed in the stomach
- 3. It stimulates peristalsis.
- 4. It emulsifies fats present in the food

- (1) 1 & 4 (2) 1 & 2
- (3) 2 & 4 (4) 4 only.

26. Which enzyme hydrolyses the peptide bonds and works in the stomach?

- (1)trypsin (2)pepsin
- (3)amylase (4)lipase

27. Caecum is a blind sac which

- (1) secretes gastrointestinal hormones
- (2) produces digestive juices
- (3) hosts symbiotic microorganisms
- (4) protects against pathogenic microorganisms

28. A human enzyme is purified and found to have maximal activity at a pH between 2.5 and 3.0 The enzyme is most likely to be from the

- (1) bloodstream. (2) stomach.
- (3) small intestine. (4) liver.

29. Which of the following functions are undertaken by the liver?

- I. Antibody production.
- II. Production of red blood cells in adults.
- III. Storage of minerals.
- IV. Conversion of glucose to glycogen.
- V. Synthesis of adrenalin.
- VI. Production of bile.

(1) I, II, IV only.

(2) II, III, V, VI only.

(3) II, IV, V, VI only.

(4) III, IV, VI only

30. Secretions into the digestive tract may perform which of the following functions in humans?

I. Alteration of the pH of the gut contents.

II. Solubilization of hydrophobic molecules such as lipids.

III. Release of bacteria which facilitate digestion of macromolecules.

IV. Release of digestive enzymes.

(1) II and IV only.

(2) I, II and III only.

(3) I, II, IV only.

(4) I, II, III & IV

Test 08 – Plant growth and Development and Digestion and absorption

By Monika Deshmukh

01. The cells proximal to the meristematic zone represents the phase of
a) Division b) Maturation
c) Elongation d) Meristematic division
02. In S-shaped curve, the growth is highest in which phase?
a) Lag phase b) Steady phase
c) Log phase d) All of these
03. Exponential growth can't be sustained for much time due to
I. limited space and nutrient
II. accumulation of toxic agent
III. unlimited space and nutrient
IV. accumulation of nutrient agent
a) I and III b) III and IV
c) I and II d) IV and II
04. I. Increased vacuolation
II. Cell enlargement
III. New cell wall deposition
Which of the above are the characteristics of phase of elongation?
a) I and II b) II and III
c) I and III d) I, II and III
05. Name the process when dedifferentiated cells again lose the ability to divide and get mature?
a) Cell-enlargement
b) Redifferentiation
c) Dedifferentiation
d) Differentiation
06. Which one is the example of dedifferentiation?
a) Procambium and vascular cambium
b) Cork cambium and interfascicular cambium
c) Cork cambium and vascular cambium
d) Procambium and cork cambium
07. Environment heterophylly is seen in
a) Cotton b) Coriander
c) Larkspur d) Buttercup
08. I. Plasmatic growth
II. Differentiation
III. Maturation
IV. Senescence
Identify the correct sequence of the following events occurring in plants and choose the correct option accordingly
a) I → II → III → IV b) I → II → IV → III
c) IV → III → II → I d) IV → I → II → III
09. Auxanometer is used to measure
a) The growth in length of a plant organ
b) The growth in breadth of a plant organ
c) Population of the pests attacking a plant
d) Both (a) and (b)
10. The stress hormone that helps plant to respond drought is
a) Auxins b) Abscisic acid
c) Cytokinin d) Ethylene
11. The natural plant hormone isolated from corn kernels and coconut milk is
a) Florigen b) GA3
c) Free auxins d) Zeatin
12. Which of the following pairs, is not correctly matched?
a) Abscisic acid - Stomatal closure
b) Gibberellic acid - Leaf fall
c) Cytokinin - Cell division
d) IAA - Cell wall elongation
13. How does pruning help in making the hedge dense?
a) It induces the differentiation of new shoots from the rootstock
b) It frees axillary buds from apical dominance
c) The apical shoot grows faster after pruning
d) It releases wound hormones
14. Which one of the following acids is a derivative of carotenoids?
a) Indole-butyric acid b) Indole-3 acetic acid
c) Gibberellic acid d) Abscisic acid
15. Treatment of seed at low temperature under moist conditions to break its dormancy, is called
a) Scarification b) Vernalization
c) Chelation d) Stratification
16. Which of the following metals is present in vitamin-B12?

Test 08 – Plant growth and Development and Digestion and absorption

By Monika Deshmukh

- a) Cobalt b) Copper
c) Zinc d) Magnesium
17. Which of the following is called as a detritivore?
a) An animal feeding on decaying organic matter
b) An animal feeding on a plant
c) A plant feeding on an animal
d) An animal feeding on another animal
18. The Digestive enzyme that is not found in human pancreatic juice is
a) Nucleotidase b) Nuclease
c) Trypsin d) Lipase
19. Consider the following statements.
I. The anti-pellagra vitamin is nicotinamide present in milk, yeast, meat and leafy vegetables.
II. Crypts of Lieberkuhn are present in the liver.
III. Steapsin is the pancreatic amylase.
a) I and II correct
b) II and III correct
c) I and III incorrect
d) I and III correct
20. In which layer of the wall of alimentary canal, secretory glands are present?
a) Serosa b) Mucosa
c) Muscularis d) Submucosa
21. Starch is converted to maltose by the action of
a) Invertase b) Amylase
c) Sucrase d) Maltase
22. Secretin hormone is secreted from
a) Stomach and stimulates gastric gland
b) Duodenum and stimulates liver
c) Thyroid and stimulates thyroid gland
d) Duodenum and stimulates pancreas
23. In the Absence of enterokinase, the digestion of would be affected in our intestine.
a) Maltose b) Amino acid
c) Albumin d) Starch
24. What will happen if the secretion of parietal cells of gastric glands is blocked with an inhibitor?
a) Gastric juice will be deficient in chymosin
b) Gastric juice will be deficient in pepsinogen
c) In the absence of HCl secretion, inactive pepsinogen is not converted into the active enzyme pepsin
d) Enterokinase will not be released from the duodenal mucosa and so trypsinogen is not converted to trypsin
25. Digestive enzymes are
a) Hydrolases b) Oxidoreductases
c) Transferases d) Lyases
26. The gastric juice contains
a) Trypsin, pepsin, lipase
b) Pepsin, lipase, rennin
c) Pepsin, amylase, trypsin
d) Trypsin, pepsin, rennin
27. A young infant may be feeding entirely on mother's milk, which is white in colour but the stools, which the infant passes out is quite yellowish. This yellow colour is due to
a) Intestinal juice
b) Bile pigments passed through bile juice
c) Undigested milk protein casein
d) Pancreatic juice poured into duodenum
28. The mucosal layer in the stomach form irregular folds known as
a) Villi b) Lumen
c) Rugae d) Crypts of Lieberkuhn
29. Enterokinase converts
a) Trypsinogen to trypsin
b) Pepsinogen to pepsin
c) Chymotrypsin to pepsinogen
d) Pepsin to chymotrypsin
30. Pylorus is present between
a) Small and large intestine
b) Pancreas and small intestine
c) Oesophagus and stomach
d) Stomach and duodenum

**Plant growth and development +
Digestion & absorption**

Compiled by: PP

1) Induction of flowering by low temperature in plant is-

1. Cryobiology
2. Vernalization
3. Phototropism
4. Pruning

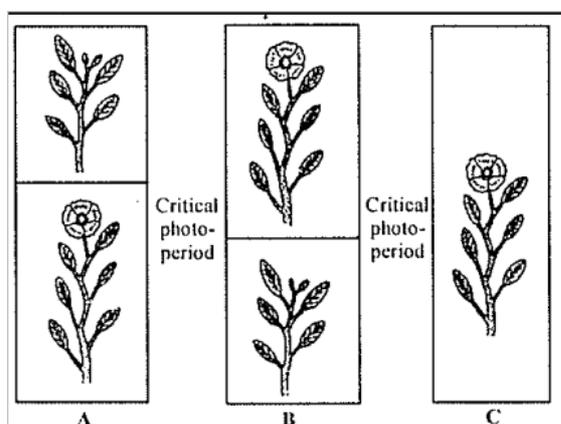
2) Bud dormancy is induced by-

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

3) Pruning of plant promotes branching because the axillary buds get sensitized to

1. ethylene
2. Gibberellins
3. cytokinin
4. IAA

4) Refer the given figure on photoperiodism and select the correct option-



A	B	C
1. no correlation between light period & flowering	Long light exposure period	Short light exposure period
2. Long light exposure period	no correlation between light period & flowering	Short light exposure period
3. Short light exposure period	Long light exposure period	no correlation between light period & flowering
4. no correlation between light period & flowering	Short light exposure period	Long light exposure period

5) ABA is known as the stress hormone because it

1. breaks the dormancy
2. Induces flowering
3. promotes leaf fall

4. Promotes closure of stomata

6) One hormone hastens maturity period in juvenile conifers, a second hormone controls xylem differentiation, while the third hormone increase the tolerance of plants to various stresses. They are respectively-

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

7) Identify the incorrect option for effects of the red and far red light

Red light	Far red light
1. Stimulates germination	Inhibits germination
2. inhibite flowering in SDPs	Stimulates flowering in SDPs
3. causes epicotyls hook to unbend	Maintains bending of epicotyls hook
4. inhibits the formation of anthocyanins	Stimulates the formation of anthocyanins

8) Which of the generally acts as an antagonistic to GA?

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

9) Hypothetical plant hormones are -

1. Florigen
2. Vernalin
3. auxin
4. Florigen & vernalin

10) Organogenesis or morphogenesis in tissue culture is controlled by phytohormones, the credit of this important discovery goes to-

1. Skoog and Miller
2. Guha & Maheshwari
3. Calvin and Bensen
4. Halperin and Wetherall

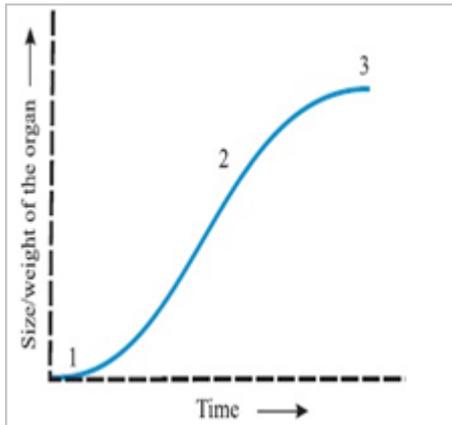
11) The Avena curvature is used for bioassay of -

1. GA₃
2. Ethylene
3. IAA
4. ABA

12) Dr F W Went noted that if coleoptiles tips were removed and placed on agar would produce a bending when placed on one side of freshly cut coleoptiles stumps. Of what significance is this experiment ?

1. It made possible the identification and exact identification of auxin.
2. It is the basis of quantitative determination of small amounts of growth promoting substances.
3. It demonstrated polar movement of auxin
4. It supports the hypothesis that IAA is auxin

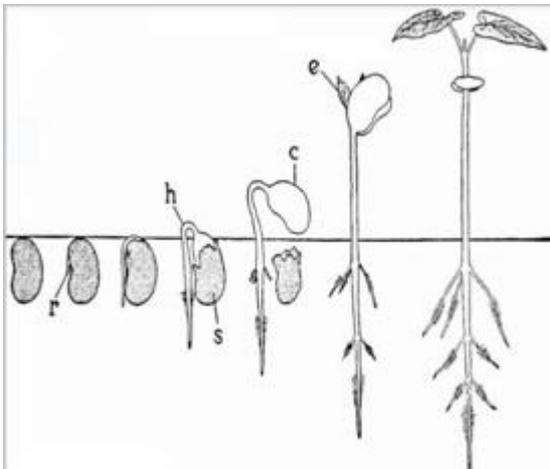
13) In the figure of sigmoid growth curve given below, label 1,2,3.



1. Log, lag and steady phases
 2. Lag, steady, and log phases
 3. Lag, log and steady phases
 4. Steady, log and lag phases
- 14) Match the following :

1. IAA	i. herring sperm of DNA
2. ABA	ii. Bolting
3. Ethylene	iii. Stomatal closure
4. GA	iv. Weed free lawns
5. Cytokinins	v. ripening of fruits

1. 1-iv, 2-iii, 3-v, 4-ii, 5-i
 2. 1-v, 2-iii, 3-iv, 4-ii, 5-i
 3. 1-iv, 2-i, 3-v, 4-iii, 5-ii
 4. 1-v, 2-iii, 3-ii, 4-i, 5-iv
- 15) Label c, e, h, r and s respectively, in the diagram shown below-



1. c-cotyledon, e- plumule, h-hypocotyl, r-radicle, s- seed
2. c-cotyledon, e- epicotyl, h-hypocotyl, r-radicle, s- seed coat
3. c- caruncle, e- plumule, h-hypocotyl, r-radicle, s- seed
4. c-cotyledon, e- plumule, h-hypocotyl, r-radicle, s- seed coat

16) Select the correct match of the digestive products in human given in column I with their absorption site and mechanism in column II-

Column I	Column II
----------	-----------

1. Glycine & glucose	Small intestine and active absorption
2. Fructose & Na ⁺	Small intestine and passive absorption
3. Glycerol & fatty acids	Duodenum & move as chylomicron
4. Cholesterol & maltose	Large intestine & active absorption

17) Anxiety and eating spicy food together in an otherwise normal human may lead to -

1. indigestion
2. jaundice
3. diarrhoea
4. vomiting

18) Two friends are eating together on a dining table. One of them suddenly starts coughing while swallowing some food. This coughing would have been due to improper movement of -

1. diaphragm
2. neck
3. tongue
4. epiglottis

19) Rennin act on -

1. milk changing casein into calcium paracaesin at 7.2 -8.2 pH
2. protein in stomach
3. fat in intestine
4. milk changing casein into calcium paracaesinate at pH 1-3

20) In vertebrate lacteals are found in -

1. ileum
2. ischium
3. oesophagus
4. ear

21) The hormone that stimulates the stomach to secrete gastric juice is-

1. gastrin
2. renin
3. enterokinase
4. enterogasteron

22) What is common among amylase, rennin and trypsin?

1. all are proteins
2. all are proteolytic enzymes
3. all are produced in stomach
4. all act on lower pH 7

23) If for some reason our goblet cells are non-functional, this will adversely affect

1. production of somatostatin
2. secretion of sebum from sebaceous glands
3. maturation of sperms
4. smooth movement of food down the intestine

24) Duodenum has characteristic Brunner's glands which secrete two hormones called

1. kinase, esterase
2. secretin, cholecystokinin
3. prolactin, parathormone
4. estradion, progesterone

25) Which one of the following is the correct matching of the site of action on the given

substrate , the enzyme acting upon it and the end product?

1. Duodenum : Triglyceride trypsin monoglyceride

2. Small intestine: starch amylase disachharide (maltose)

3. Small intestine : proteins pepsin aminoacids

4. Stomach: Fats lipase micelles

26) Muscularis lyster of the wall of the alimentary canal is formed by-

1.smooth muscle arranged into an inner longitudinal and an outer circular layer

2.smooth muscle arranged into an inner circular and an outer longitudinal layer

3. skeletal muscle arranged into an inner longitudinal and an outer circular layer

4.skeletal muscle arranged into an inner circular and an outer longitudinal layer

27) Which of the following gastric secretory cells is correctly matched with its secretion?

1. Chief cells - gastrin

2. Parietal cells- HCl and intrinsic factor

3. Enteroendocrine cells- mucus and hormones

4. mucous cells- pepsinogen and mucus

28) A baby boy aged 2 years is admitted to play school and passes through a dental check up . The dentist observed tha the boy had twenty teeth. Which of the teeth were absent.

1. Incisors

2. Canines

3. Premolars

4. Molars

29) Which of the following options best represents enzyme composition of pancreatic juice.

1.Amylase, peptidase, trypsinogen, rennin

2. Amylase, pepsin, trypsinogen, maltase

3. Peptidase, amylase, pepsin, rennin

4. Lipase, amylase, trypsinogen, procarbopetidase

30) Which of the following guards the opening of hepatopancreatic duct into the duodenum?

1. illeacocaecal valve 2. Pyloric sphincter

3. sphincter of Oddi 4. semilunar valve