



BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE PAPER - 5 (BIOLOGY)

Section I

1. Scientific name of garden pea, which Mendel used for his experiments

A. *Pisum sativum*

B. *Mimosa pudica*

C. *Coriandrum sativum*

D. *Allium sativum*

Answer: A



View Text Solution

2. Loss of water through a cut stem or injured part of plant.

A. Guttation

B. Turgidity

C. Flaccidity

D. Bleeding

Answer: D



View Text Solution

3. Phase in which chromosomes move to the middle of the cell.

A. Anaphase

B. Prophase

C. Metaphase

D. Interphase

Answer: C



View Text Solution

4. Mendel's law obeyed in appearance of a hidden character in some offspring in F_2 , generation.

A. Dominance

B. Independent assortment

C. Co-dominance

D. Purity of gametes

Answer: D



View Text Solution

5. Tissue responsible for transportation of food in the plant.

A. Phloem

B. Xylem

C. Cambium

D. Vacuole

Answer: A



View Text Solution

6. Sweat out of water along with dissolved substances directly in the liquid form from the margins of the leaves is known as_____.

A. transpiration

B. respiration

C. guttation

D. bleeding

Answer: C



View Text Solution

7. If a heterozygous tall plant is crossed with a homozygous dwarf plant, then the ratio of the dwarf plant is _____.

A. 0.25

B. 0.5

C. 0.75

D. 1

Answer: B



View Text Solution

8. After mitotic cell division, a female human cell will have_____.

A. 44+XX chromosome

B. 44+ XY chromosome

C. 22+X chromosome

D. 22+ Y chromosome

Answer: C



View Text Solution

9. If you put a potato into a sugar solution, it shrinks over time due to_____.

A. endosmosis

B. diffusion

C. exosmosis

D. active transport

Answer: D



View Text Solution

10. During night, increase in C, concentration around the leaf causes_____.

- A. rapid opening of stomata
- B. partial closure of stomata
- C. complete closure of stomata
- D. no effect on stomatal opening

Answer: C



View Text Solution

11. When water enters the cell, one of the pressures is exerted on cell wall.

A. Osmotic pressure

B. Suction pressure

C. Turgor pressure

D. Root pressure

Answer: C



View Text Solution

12. A cross was made between tall and dwarf plants. In F₁ generation all plants were tall, when the F₁ plants were selfed, the tall and

dwarf plants appeared in 3:1 ratio in F_2 generation. This is due to:

- A. Dominance
- B. Hybridisation
- C. Crossing over
- D. Segregation

Answer: D



View Text Solution

13. Potometer works on the principle of:

A. Osmotic pressure

B. Amount of water absorbed equals the amount transpired

C. Potential difference between the tip of the tube and that of the plant

D. Root pressure

Answer: B



[View Text Solution](#)

14. The two cobalt chloride papers are attached, one on the dorsal and the other on the ventral surface of a doriventral leaf with the help of glass slide and clips. The set up is left in the open for few hours.

A. Cobalt chloride paper remain blue on the upper surface of the leaf

B. Cobalt chloride paper tum blue to pink on the lower surface of the leaf

C. Cobalt chloride paper turn blue to pink
after a long time on the upper surface of
the leaf

D. All of these

Answer: D



View Text Solution

15. The recessive gene is one that expresses
itself in:

A. Heterozygous condition

B. Homozygous condition

C. F_2 generation

D. Y-linked inheritance

Answer: B



View Text Solution

Section II

1. Independent assortment:

A. Separation of characters of one parent

B. Non separation of characters of one parent

C. Combination of parental characters

D. Separation of parental characters

Answer: D



View Text Solution

2. Cuticle transpiration:

A. Transpiration from leaves through stomata

B. Transpiration directly from surface of the leaves and stems

C. Transpiration through lenticels on the surface of woody stems

D. Transpiration through corky covering of the stems

Answer: B



View Text Solution

3. Hypertonic solution.

A. The outer solution having higher concentration than of the cell sap

B. The outer solution having lower concentration than of the cell sap

C. The outer solution having equal concentration as of the cell sap

D. None of these

Answer: A

 [View Text Solution](#)

4. Phosphorylation.

A. Formation of ATP from ADP and inorganic phosphate by the utilisation of

energy

B. Splitting of water molecule into hydrogen ions and hydroxyl ions in the presence of sunlight

C. Conversion of several molecules of glucose to one molecule of starch

D. Conversion of water and carbon dioxide to create oxygen and energy in the form of sugar in the presence of sunlight

Answer: A



[View Text Solution](#)

5. Transpiration.

A. Loss of water from the surface of water bodies in the form of vapour

B. Loss of water from the aerial parts of the plants in the form of water vapour

C. Loss of water from the leaf margins in the form of liquids

D. Loss of water from an injury in the form of liquids from the parts of plants

Answer: B



View Text Solution

6. Phosphate, RNA, Sugar, Nitrogenous base.

A. RNA

B. Sugar

C. Phosphate

D. Nitrogenous base

Answer: A



View Text Solution

7. Transpiration, Photosynthesis, Phagocytosis,
Guttation.

A. Photosynthesis

B. Phagocytosis

C. Guttation

D. Transpiration

Answer: B



View Text Solution

8. Prophase, Anaphase, Telophase, Interphase

A. Interphase

B. Prophase

C. Anaphase

D. Telophase

Answer: A



View Text Solution

9. Temperature, sunlight, wind velocity, water content of leaves, humidity

A. Humidity

B. Water content of leaves

C. Wind velocity

D. Temperature

Answer: B



View Text Solution

10. Muslin cloth, parchment paper, cellulose paper, cellophane paper.

A. Parchment paper

B. Muslin cloth

C. Cellophane paper

D. Cellulose paper

Answer: A



View Text Solution

11. Autosomes

- A. Determine general body features
- B. Determine sex of an organism
- C. Organization of microtubules in the cell
- D. Store all of the genetic information of an organism

Answer: B



View Text Solution

12. NADPH

A. H_2 donor during photosynthesis

B. Accepting electrons and hydrogen atoms to form NADP

C. Addition of a phosphate group to ADP

D. Splits off phosphates, becoming ADP +
phosphate

Answer: B



View Text Solution

13. Root hairs

A. Ability to transport nutrients into the
core of the root

B. Adapted to absorb light efficiently

C. Absorbing water and minerals,
anchoring and supporting the plant, and
storing food

D. Regulate gas exchange between the
plant and environment and control of
water loss

Answer: A



View Text Solution

14. Chromosomes

- A. Cell division
- B. DNA replication
- C. Sex determination
- D. All of these

Answer: A



View Text Solution

15. Thylakoids

A. Opening and closing the pores in the leaves

B. Site for light-dependent reactions of photosynthesis

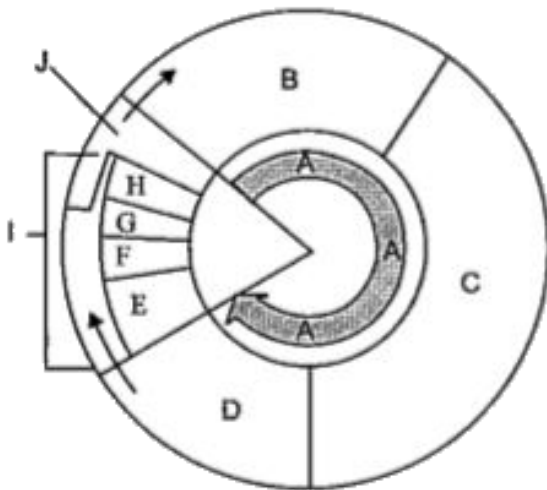
C. Transport of water and minerals vertically

D. Site for light-independent reactions of photosynthesis

Answer: C

 [View Text Solution](#)

Section Iii



1.

Which one of the following shows the "Resting

phase of the cell' ?

A. C-Synthesis phase

B. G-Anaphase

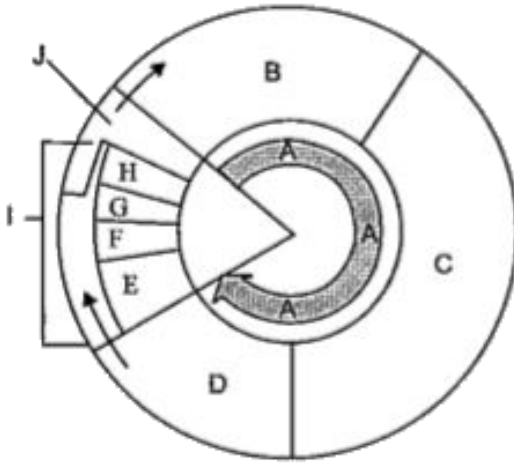
C. H-Telophase

D. A- Interphase

Answer: D



View Text Solution



2.

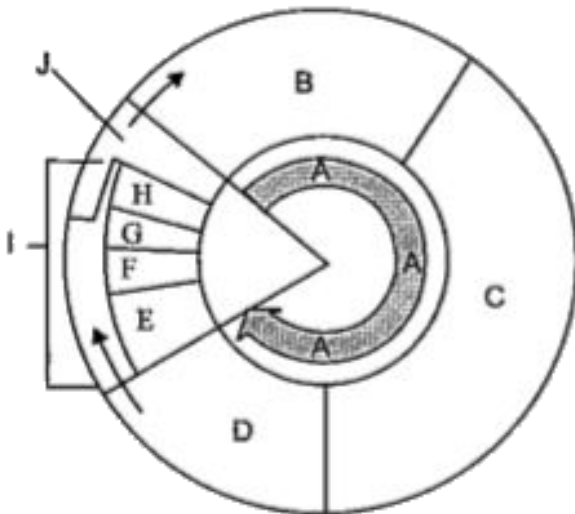
Mitochondria and chloroplast divide in:

- A. Synthesis phase
- B. First growth phase
- C. Second growth phase
- D. Mitosis

Answer: B



View Text Solution



3.

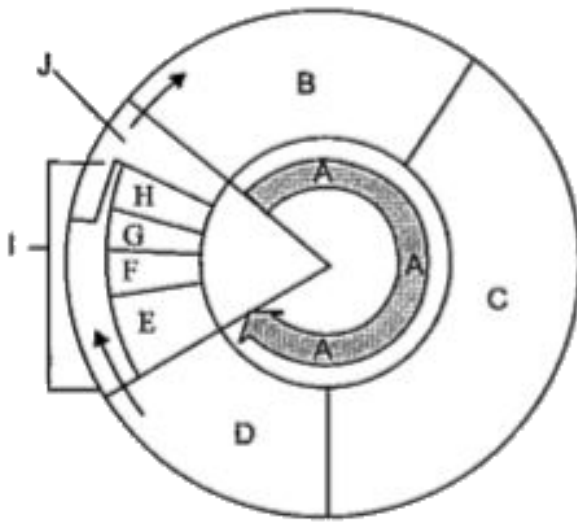
The cell cycle shows two phases of cell division. Which of the following option is true?

- A. A-Interphase-Cell is growing and preparing for cell division
- B. B- G_1 phase RNA and protein synthesised
- C. C-Synthesis phase- More DNA replication occur
- D. All of these

Answer: D



View Text Solution



4.

Rewrite the terms in logical sequence as directed at the end of each statement

Karyokinesis, S-phase, Cytokinesis, G_1 -phase, G_2 -phase

A. S-phase, M-phase, G_1 -phase,

Karyokinesis, Cytokinesis

B. G_1 -phase, S-phase, M-phase,

Karyokinesis, Cytokinesis

C. G_1 -phase, S-phase, G_2 -phase,

Cytokinesis, Karyokinesis

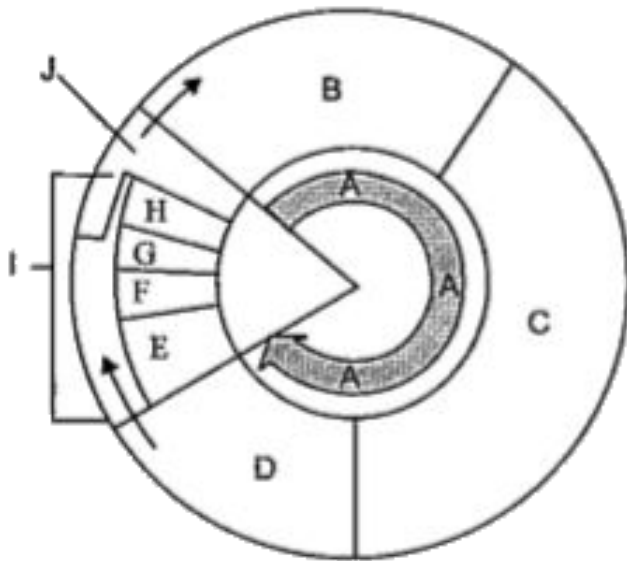
D. G_1 -phase, S-phase, G_2 -phase,

Karyokinesis, Cytokinesis

Answer: A



View Text Solution



5.

Choose the correct labelling of cell cycle phases from the following options.

I. - Prophase, F- Metaphase, G-Anaphase.

II. H-Telophase, I-Mitosis, - Cytokinesis.

III. B-G phase, C-S phase, D-G, phase.

IV. H-Metaphase, I- Karyokinesis, - Cytokinesis

- A. I and II
- B. Only III
- C. II and III
- D. All of these

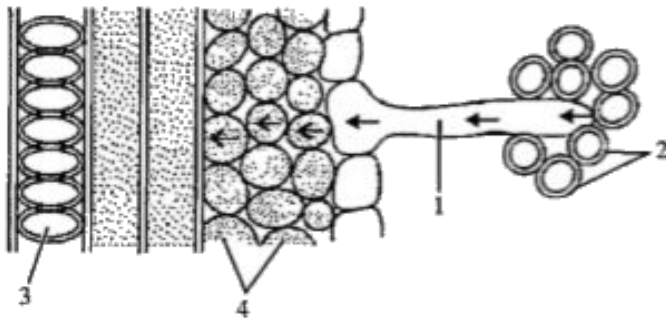
Answer: D



View Text Solution

6. The figure given below is a diagrammatic representation of a part of the cross section of the root in the root hair zone. Study the

same and then answer the question that follow:



Name all the labeling shown in the part of cross section of root in root hair:

A. 1 - Root hair cell 2 - Soil particles 3 -

Xylem vessel 4 - Cortex

B. 1 - Root hair cell 2-Water molecule 3-

Phloem vessel 4-Cortical cells

C. 1 - Root hair cell 2-Soil particles 3 - Xylem

vessel 4 - Cortical cells

D. 1 - Root hair cell 2 - Water molecule 3 -

Xylem vessel 4-Cortical cells

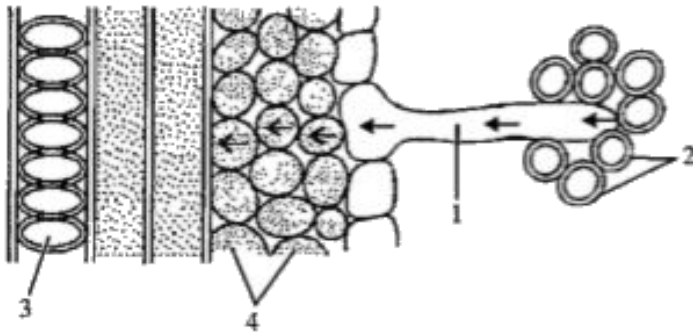
Answer: D



View Text Solution

7. The figure given below is a diagrammatic representation of a part of the cross section of the root in the root hair zone. Study the

same and then answer the question that follow:



Name the process that is responsible for the movement of water in the direction indicated by the arrows.

- A. Diffusion
- B. Osmosis
- C. Active transport

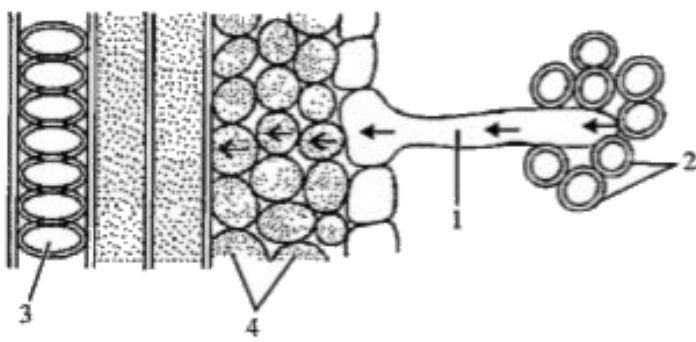
D. Passive transport

Answer: C



View Text Solution

8. The figure given below is a diagrammatic representation of a part of the cross section of the root in the root hair zone. Study the same and then answer the question that follow:



In the early mornings, mostly drops of water are found along the leaf margins of herbaceous plants due to:

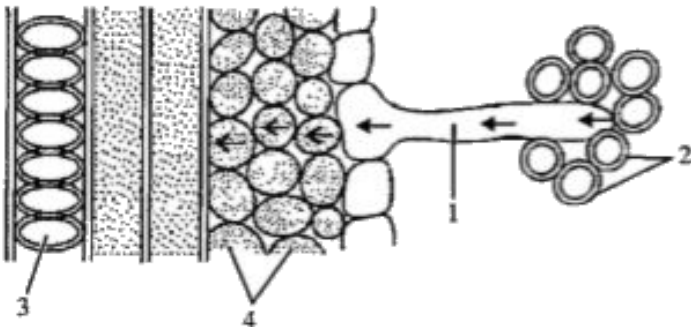
- A. Transpiration
- B. Guttation
- C. Bleeding
- D. Active transport

Answer: A



View Text Solution

9. The figure given below is a diagrammatic representation of a part of the cross section of the root in the root hair zone. Study the same and then answer the question that follow:



When excess of chemical fertilizers are added in the most soil around the root hairs:

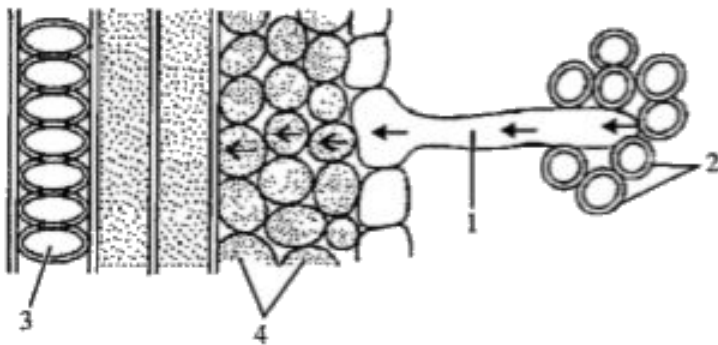
- A. Root hairs become flaccid
- B. Root hairs become turgid
- C. Root hairs are plasmolysed
- D. Root hairs are deplasmolysed

Answer: B



View Text Solution

10. The figure given below is a diagrammatic representation of a part of the cross section of the root in the root hair zone. Study the same and then answer the question that follow:



Rearrange the pathway of water and solutes from the soil to the conducting tissue of the root.

A. soil → root hair → cortex →
endodermis → pericycle →
protoxylem → phloem

B. soil → root hair → cortex →
pericycle → endodermis →
protoxylem → metaxylem

C. soil → root hair → cortex →
pericycle → endodermis →
protoxylem → metaxylem

D. soil → root hair → cortex →

endodermis → pericycle → pericycle

→ metaxylem → phloem .

Answer: B



View Text Solution