BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE PAPER 3

Section I

1. Name the following by choosing the correct option:

A plant showing guttation

A. Grass

B. Wheat

C. Banana

D. All of these

Answer: A

View Text Solution

2. Name the following by choosing the correct option:

Phase in which the cleavage furrow start forming

A. Anaphase

B. Metaphase

C. Prophase

D. Telophase

Answer: D

View Text Solution

View Text Solution

3. Name the following by choosing the correct option:

Unit of inheritance containing the information required to express a trait

A. DNA

B. Chromosome

C. Genes

D. Histones

Answer: C

View Text Solution

4. Name the following by choosing the correct option:

A layer of irregular chlorophyll-bearing cells interspersed with air spaces that fills the interior part of a leaf above lower epidermis

A. Palisade parenchyma

B. Spongy parenchyma

C. Mesophyll cells

D. Chloroplast

Answer: B

View Text Solution

5. Name the following by choosing the correct option:

The tissue responsible for upward conduction of water in the plants

A. Phloem

B. Xylem

C. Root hair

D. Epidermis

Answer: B

View Text Solution

6. Complete the following statements by choosing the appropriate option for each blank:

$$\text{\_\_\_\_\_} + 12H_2O \xrightarrow[\text{Chlorophyll}]{\text{Light Energy}} \text{\_\_\_\_\_} + 6H_2O + 6O_2$$

A. $O_2C_6H_{12}O_6$

B. $CO_2C_6H_{12}O_6$

C. $O_2C_{12}H_{22}O_{11}$

D. $CO_2C_{12}H_{22}O_{11}$

Answer: B

View Text Solution

7. Complete the following statements by choosing the appropriate option for each blank:

Synthesis phase in the cell cycle is called so, because of the synthesis of more

A. RNA

B. RNA and proteins

C. DNA

D. glucose

Answer: A

View Text Solution

8. Complete the following statements by choosing the appropriate option for each blank:

When red blood cells are placed in the water travels into the cells via osmosis, causing the cells to

A. hypertonic solution, swell

B. hypotonic solution, swell

C. isotonic solution, shrink

D. hypotonic solution, shrink

Answer: B

View Text Solution

9. Complete the following statements by choosing the appropriate option for each blank:

The process of splitting of water by sunlight during light reaction of photosynthesis is called

A. . phosphorylation

B. photolysis

C. dark phase

D. transpiration

Answer: B

View Text Solution

10. Complete the following statements by choosing the appropriate option for each blank:

Transpiration is the evaporative loss of water from

A. Roots

B. Leaves

C. Stem

D. Both 2 and 3

Answer: D

View Text Solution

11. Choose the correct answer from each of the four options given below:

After the starch test on a variegated plant leaf, we observe the parts of leaf which remains uncovered will turn to blue-black colour indicating:

A. Presence of chlorophyll

B. Absence of starch

C. Presence of starch

D. Absence of chlorophyll

Answer: C

View Text Solution

12. Choose the correct answer from each of the four options given below:

The type of gene, which in the presence of a contrasting allele is not expressed

A. Dominant allele

B. Recessive allele

C. Homozygous

D. Heterozygous

Answer: B

View Text Solution

13. Choose the correct answer from each of the four options given below:

The state of cell in which cell content is shrunken and is no more tight is,

A. Capillarity

B. Flaccidity

C. Turgidity

D. Tonocity

Answer: B

View Text Solution

14. Choose the correct answer from each of the four options given below:

During which phase do chromosomes first become visible?

A. Anaphase

B. Metaphase

C. Prophase

D. Telophase

Answer: C

View Text Solution

15. Choose the correct answer from each of the four options given below:

What do you mean by law of dominance?

A. When offspring shows the characters of generation

B. When offspring of cross breed parent only show dominant characters in F_1 generation.

C. When offspring of cross breed parent only show dominant characters in F_2 generation.

D. In F_2 generation both the character which is governed by gene are

separated.

Answer: B

View Text Solution

Section Ii

1. Explain the following terms:

Cell cycle

A. A series of chemical reactions where CO_2 is removed from the air and used by living organisms

B. A series of events taking place for DNA duplication during cell division to produce two daughter cells

C. Process that plants and algae use to turn carbon dioxide from the air into sugar, the food autotrophs need to grow

D. Sequence of reactions in which oxidation of acetic acid or acetyl equivalent provides energy for storage in phosphate bonds in the living organism

Answer: B

View Text Solution

2. Explain the following terms:

Photosynthesis

A. Conversion of light energy into chemical energy

B. Oxidation of carbon to carbon dioxide

C. Absorption of light energy by chlorophyll

D. All of these

Answer: D

View Text Solution

3. Explain the following terms:

Genetics

A. Study of heredity in living beings

B. Study of variation in living beings

C. Study of both heredity and variation

D. None of these

Answer: C

View Text Solution

4. Explain the following terms:

Turgor pressure

A. Transverse osmotic pressure within the cells of a root system

B. The pressure exerted on the contents of a plant cell by the cell wall

C. Pressure exerted by fluid in a cell that presses the cell membrane against the cell wall

D. Pressure exerted by molecules with the tendency to diffuse from the region of their higher concentration to the region of their lower concentration

Answer: C

View Text Solution

5. Explain the following terms:

Guttation

A. Absorption of water by general surface like woods

B. Secretion of droplets of water from the pores of plants

C. Exhalation of water vapour through the stomata

D. Exchange of gases in the leaves

Answer: B

View Text Solution

6. Choose odd one out from the following:

Coelus, Croton, Mango, Geranium, Papaya

A. Coelus and Croton

B. Mango and papaya

C. Croton and mango

D. Geranium and papaya

Answer: B

View Text Solution

7. Choose odd one out from the following:

Guanine, thymine, adenine, cytosine, pepsin

A. Guanine

B. Cytosine

C. Pepsin

D. Adenine

Answer: C

View Text Solution

8. Choose odd one out from the following:

Chloroplast, guard cells, stoma, nucleus, lenticels

A. Chloroplast

B. stoma

C. Nucleus

D. Lenticels

Answer: D

View Text Solution

9. Choose odd one out from the following:

Synthesis phase, G_1 phase, Metaphase, G_2 phase

A. G_2 phase

B. Metaphase

C. G_1 phase

D. Synthesis phase

Answer: B

View Text Solution

10. Choose odd one out from the following:

Pericycle, endodermis, xylem, cortex, chromatin

A. Cortex

B. Pericycle

C. Chromatin

D. Xylem

Answer: C

View Text Solution

11. State the function of the following:

Palisade Parenchyma

A. Absorb light required for photosynthesis

B. Supply of carbon dioxide and the removal of oxygen

C. Opening and closing the pores in the leaves

D. Conversion of glucose into starch

Answer: B

View Text Solution

12. State the function of the following:

Phloem

A. Transport water from roots to shoots and leaves

B. Permeability barrier to prevent the evaporation of water from the outer epidermal surface

C. Transportation of food and nutrients such as sugar from leaves to other parts of plant

D. Absorb light and carbon dioxide to produce glucose

Answer: C

View Text Solution

13. State the function of the following:

Manometer

A. Equipment to measure atmospheric pressure

B. Equipment to measure rate of transpiration

C. Equipment to measure root pressure

D. Equipment to measure turgor pressure

Answer: C

View Text Solution

14. State the function of the following:

Endodermis

A. Regulates the formation of lateral roots by rapidly dividing near the xylem elements of the root

B. Regulate the movement of water, ions and hormones into and out of the vascular system

C. Permeability barrier in plants to prevent the evaporation of the water from the outer epidermal surface

D. To carry out photosynthetic carbon assimilation which facilitates plant growth

Answer: B

View Text Solution

15. State the function of the following:

Nucleotides

A. energy carriers,

B. components of enzyme cofactors

C. chemical messengers

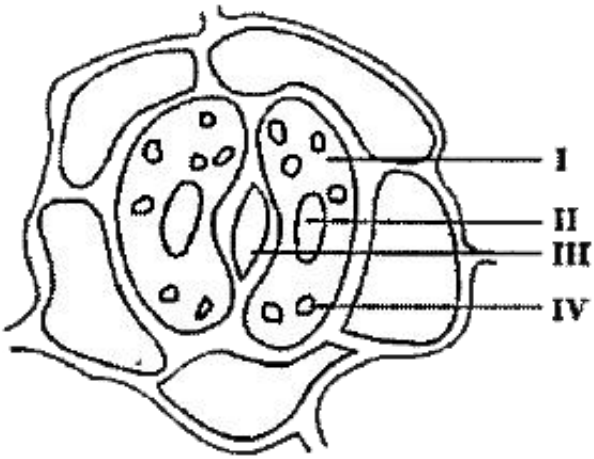
D. All of these

Answer: D

View Text Solution

Section Iii

1. Study the diagram of a open stomata marked with labels. Answer the following questions based on stomata.



Choose the appropriate labeling from the following options:

A. I- Stomata, 11- Chloroplast, III- Nucleus, IV-Guard cells

B. I-Guard Cells, II- Chloroplast, III- Stomata, IV- Nucleus

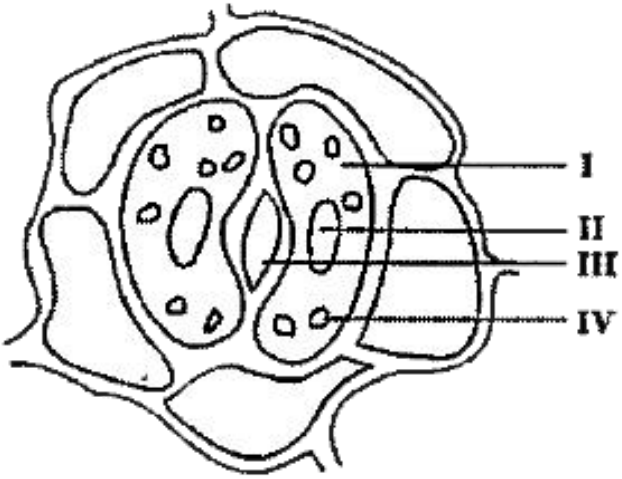
C. I-Guard Cells, II-Nucleus, III- Stomata, IV- Chloroplast

D. I - Stomata, II-Nucleus, III- Guard Cells, IV- Chloroplast

Answer: C

View Text Solution

2. Study the diagram of a open stomata marked with labels. Answer the following questions based on stomata.



Stomata open and close due to

A. Turgor pressure of guard cells

B. Root pressure

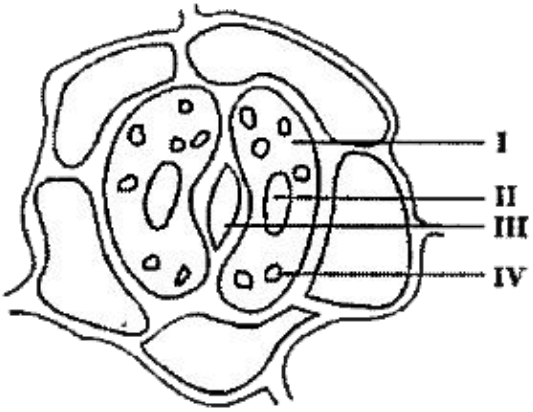
C. Osmotic pressure

D. Imbibitional pressure

Answer: A

View Text Solution

3. Study the diagram of a open stomata marked with labels. Answer the following questions based on stomata.



During the day, the plants keep their:

A. Stomata opens

B. Stomata closed

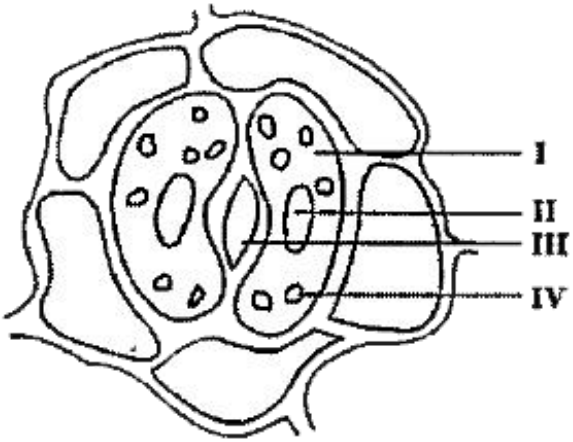
C. Phloem blocked

D. Xylem blocked

Answer: A

View Text Solution

4. Study the diagram of a open stomata marked with labels. Answer the following questions based on stomata.



The inner side of guard cells is

A. Rough

B. Straight

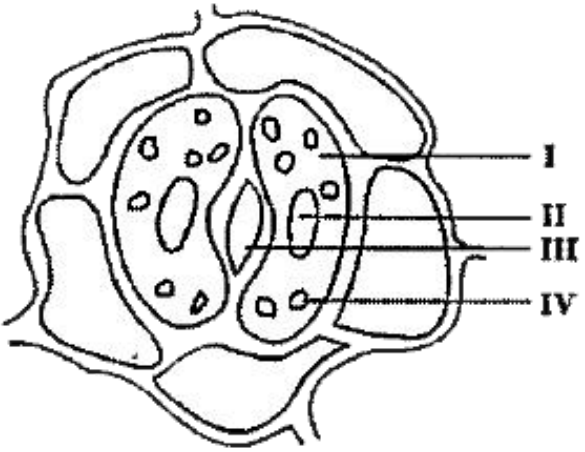
C. Concave

D. Convex

Answer: C

View Text Solution

5. Study the diagram of a open stomata marked with labels. Answer the following questions based on stomata.



The opening and closing of the stomatal pores depends upon:

A. oxygen

B. water in guard cells

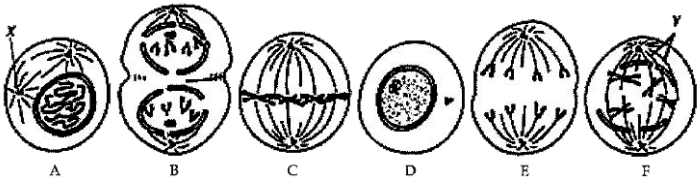
C. temperature

D. concentration of CO_2 in stomata

Answer: D

View Text Solution

6. Study the diagram related to Mitosis cell division and answer the following questions:



Which of the following is in Metaphase?

A. Cell A

B. Cell B

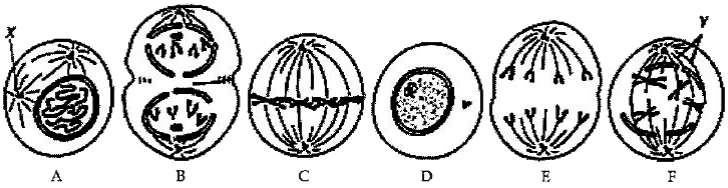
C. Cell C

D. Cell E

Answer: C

View Text Solution

7. Study the diagram related to Mitosis cell division and answer the following questions:



In cell A, what is the structure labeled X?

A. . Centrosome

B. Centriole

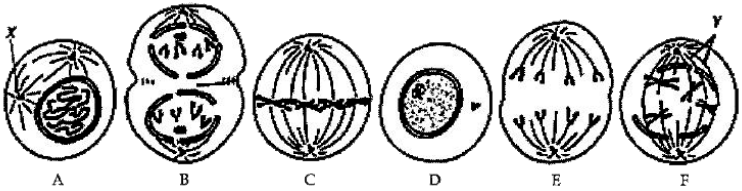
C. Chromatid

D. Aster

Answer: B

View Text Solution

8. Study the diagram related to Mitosis cell division and answer the following questions:



A new membrane is forming in B. What is this phase called?

A. Metaphase

B. Prophase

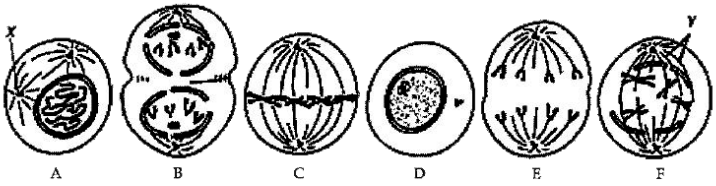
C. Telophase

D. Anaphase

Answer: C

View Text Solution

9. Study the diagram related to Mitosis cell division and answer the following questions:



Which of the cells show early prophase and late prophase of mitosis?

A. Cell A and Cell D

B. Cell A and Cell F

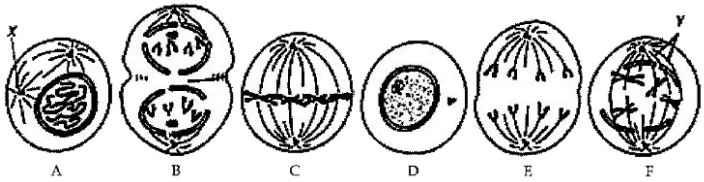
C. Cell D and Cell E

D. Cell D and Cell F

Answer: B

View Text Solution

10. Study the diagram related to Mitosis cell division and answer the following questions:



Sequence the six diagrams in order from first to last stages of cell division

A. A $\rightarrow$ F $\rightarrow$ C $\rightarrow$ E $\rightarrow$ B $\rightarrow$ D

B. D $\rightarrow$ A $\rightarrow$ F $\rightarrow$ C $\rightarrow$ B $\rightarrow$ E

C. B $\rightarrow$ D $\rightarrow$ C $\rightarrow$ E $\rightarrow$ A $\rightarrow$ F

D. D $\rightarrow$ A $\rightarrow$ F $\rightarrow$ C $\rightarrow$ E $\rightarrow$ B

Answer: D

View Text Solution