



BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

QUESTION PAPER 2022 TERM 1

Multiple Choice Question

1. The process of conversion of ADP to ATP during Photosynthesis:

A. Polymerisation

B. Photophosphorylation

C. Photorespiration

D. Photolysis

Answer:



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2. Permanently open structures seen on the barks of old woody stems:

A. Stomata

B. Hydathodes

C. Lenticels

D. Epidermal pores

Answer:



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3. The pressure developed in the roots due to continuous inward movement of water by cell to cell osmosis:

A. Root pressure

B. Wall pressure

C. Turgor pressure.

D. Air pressure.

Answer:



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

A. Homozygous

B. Heterozygous

C. Dominant

D. Recessive

Answer:



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5. After mitotic division, a female human cell will have

A. 44 + XX chromosomes.

B. 22 + X chromosomes

C. 22+ Y chromosomes.

D. 44 + XY chromosomes.

Answer:



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6. At the end of _____ Cytokinesis is completed.

A. Metaphase

B. Prophase

C. Interphase

D. Telophase

Answer:



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7. The genotype of a person who cannot roll his tongue is _____

A. Rr

B. RR

C. rr

D. RRr

Answer:



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8. When a cell is placed in a hypertonic solution:

A. Distilled water

B. Hypertonic

C. Isotonic

D. Hypotonic

Answer:



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9. The nitrogenous base Adenine always pairs
with _____

A. Thymine

B. Guanine

C. Cytosine

D. Thiamine

Answer:



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10. The basic units of heredity are _____

A. Chromosomes

B. Chromatids

C. Genes

D. Centrosome

Answer:



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11. Choose the correct answer from the given four options :

NADP is expanded as

A. Nicotinamide Adenosine Dinucleotide
Phosphate.

B. Nicotinamide Adenine Dinucleotide
Phosphate.

C. Nicotinamide Adenine Dinucleolus
Phosphate.

D. Nicotinamide Adenosine Dinucleolus
Phosphate.

Answer:



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12. Transpiration is useful to the plant because it:

- A. Creates a suction force for absorption of water from the soil.
- B. Helps in Photophosphorylation.
- C. Synthesises glucose.
- D. Splits water molecules.

Answer:





13. A homozygous pea plant having purple flowers is crossed with a homozygous pea plant bearing white flowers. The phenotypic ratio of the offspring obtained in F_2 generation is:

A. 2:1

B. 1:1

C. 1:2:1

D. 3:1

Answer:



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14. A shoot from a balsam plant is kept in a beaker containing eosin solution (pink). The pink colour will be distinctly seen in the:

- A. Xylem
- B. Phloem
- C. Epidermis
- D. Cortex

Answer:



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15. Replication of DNA in the cell cycle occurs during the

A. G_1 - phase.

B. Anaphase.

C. S-phase.

D. G_2 -phase

Answer:



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16. Explain the following terms:

Karyokinesis:

A. It is the division of nucleus during cell division.

B. It is the division of cytoplasm during cell division.

C. It is the division of centrosome.

D. It is the division of nucleolus.

Answer:



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17. Explain the following terms:

Law of Dominance:

A. Out of a pair of contrasting alleles present together, only the recessive

allele is able to express itself while the dominant remains suppressed.

B. Out of a pair of contrasting alleles present together, only the dominant allele is able to express itself while the recessive remains suppressed.

C. Out of a pair of contrasting alleles present together, both the dominant and recessive cannot express themselves.

D. Out of a pair of contrasting alleles present together, both the dominant and recessive can express themselves.

Answer:



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18. Explain the following terms:

Mutation:

A. It is a sudden change in one or more genes in an organism's cells which is heritable.

B. It is change in the number of centrosomes in an organisms's cells which is heritable.

C. It is a change in the structure of cell membrane in an organism's cells which is heritable.

D. It is a change in the shape of cells which is heritable.

Answer:



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19. Explain the following terms:

Photosynthesis:

A. It is the synthesis of glucose from carbon dioxide by nongreen plants using

light energy

B. It is the synthesis of glucose by green plants from carbon dioxide using light energy.

C. It is the synthesis of glucose from carbon dioxide and water by non green plants using light energy.

D. It is the synthesis of glucose from carbon dioxide and water by green plants using light energy.

Answer:



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20. Explain the following terms:

Transpiration:

A. It is the loss of water in the form of droplets from the aerial parts of the plant.

B. It is the loss of water in the form of water vapour from the underground parts of the plant.

C. It is the loss of water in the form of water vapour from the aerial parts of the plant.

D. It is the loss of water in the form of water vapour from all parts of the plant.

Answer:



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21. Mention the exact location of the following:

Aster:

- A. Around the centrioles in plant cells.
- B. Around the centrioles in animal cells.
- C. Around the chromatids in animal cells.
- D. Around the chromatids in plant cells,

Answer:



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22. Mention the exact location of the following:

Guard Cells:

- A. Around the root hairs.
- B. Around the lenticels.
- C. Around the thylakoids.
- D. Around the stoma.

Answer:



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23. Mention the exact location of the following:

Xylem tissue:

- A. Conducts water and minerals in leaves.
- B. Does not conduct water and minerals in stems.
- C. Conducts food and nutrients to roots.

D. Conducts food and nutrients to all parts of the plant.

Answer:



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24. Mention the exact location of the following:

Centrioles:

A. Found only in plant cells.

B. Found inside nucleus.

C. Found only in animal cells.

D. Found in animal and plant cells.

Answer:



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25. Mention the exact location of the following:

Genes:

- A. Present on cell wall.
- B. Present on chloroplast.
- C. Present on chromosomes.
- D. Present on centrosomes.

Answer:



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26. State the functions of the following:

Cell wall:

- A. Regulates entry of solutes in plant cells.
- B. Regulates entry of solutes in animal cells.
- C. Gives rigidity and shape to plant cells.
- D. Gives rigidity and shape to animal cells.

Answer:



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27. State the functions of the following:

Centromere:

A. It is the point of attachment of two sister chromatids.

B. It is the point of attachment of two centrioles.

C. It is the point of attachment of two centrosomes.

D. It is the point of attachment between two daughter nuclei.

Answer:



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28. State the functions of the following:

Cuticle on leaves:

A. Prevents photosynthesis.

B. Reduces transpiration.

C. Protects leaves from grazing animals.

D. Gives colour to leaves.

Answer:



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29. Hydathodes:

A. Transpiration.

B. Absorption of water

C. Photosynthesis

D. Guttation.

Answer:



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30. Grana of chloroplast is not the :

A. Site of Light Independent Phase

B. Site of Light Dependent Phase .

C. Site of Photolysis

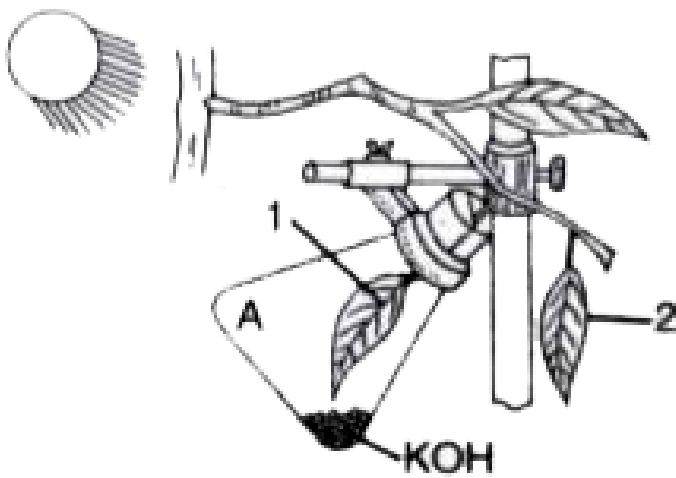
D. Site of Photon absorption

Answer:



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31. The figure given below represents an experiment to demonstrate a particular aspect of photosynthesis. The alphabet "A" represents a certain condition inside the flask



What is the aim of the experiment

A. To show that oxygen is released during

Photosynthesis

B. To show that Photosynthesis occurs in

the presence of KOH.

C. To show that chlorophyll is necessary for
Photosynthesis

D. To show that carbon dioxide is necessary
for Photosynthesis.

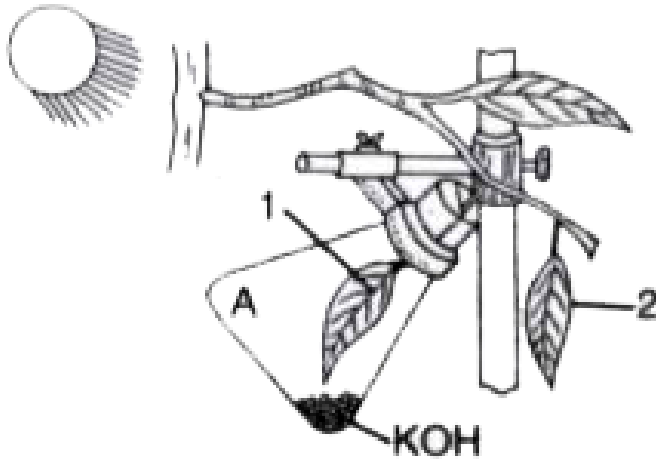
Answer:



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32. The figure given below represents an experiment to demonstrate a particular aspect of photosynthesis. The alphabet "A" represents

a certain condition inside the flask



Identify one special condition inside the flask

- A. Air inside the flask is free of oxygen
- B. Air inside the flask is free of carbon dioxide
- C. Air inside the flask is free of nitrogen

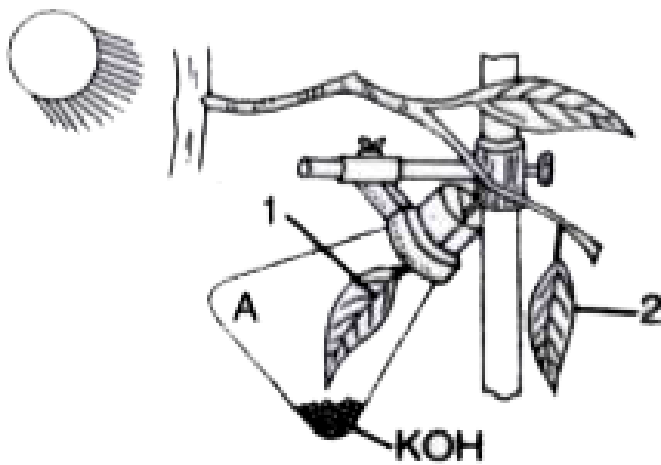
D. KOH purifies the air inside the flask

Answer:



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33. The figure given below represents an experiment to demonstrate a particular aspect of photosynthesis. The alphabet "A" represents a certain condition inside the flask



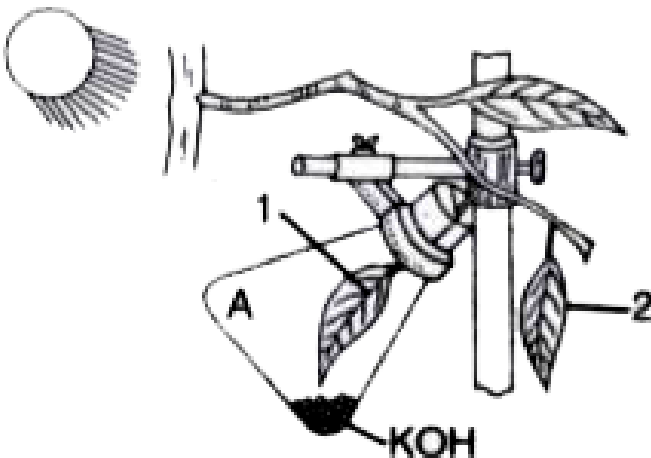
Name an alternative chemical which can be used instead of KOH

- A. Sodium hydroxide
- B. Sodium chloride
- C. Potassium Chloride
- D. Potassium permanganate.

Answer:

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34. The figure given below represents an experiment to demonstrate a particular aspect of photosynthesis. The alphabet "A" represents a certain condition inside the flask



In what manner do the leaves 1 and 2 differ at the end of the starch test

A. Leaf 1 turns brown, Leaf 2 turns blue black

B. Leaf 1 turns blue black , Leaf 2 turns brown.

C. Leaf 1 turns purple , Leaf 2 remains green

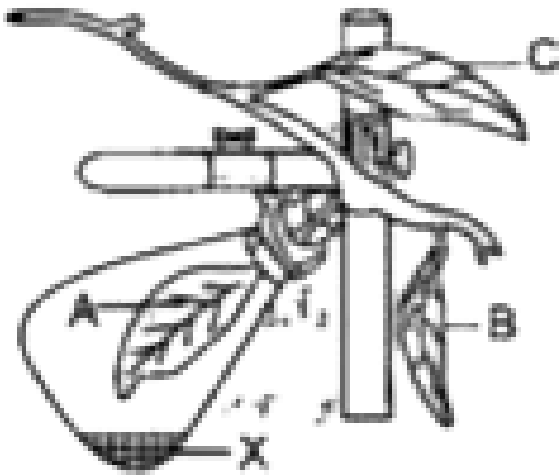
D. There is no change in the colour of the leaves .

Answer:



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35. The diagram below represents an experiment to demonstrate a particular aspect of a physiological process in plants. Study the diagram and answer the questions that follows:



Explain the term Destarching.

A. The plant should be placed in dark for 24 hours to destrach the entire plant

B. The plant Should be placed in dark for 24 hour to remove chlorophyll for the leaves .

C. The plant should be placed in dark for 24 hours to destrach the leaves

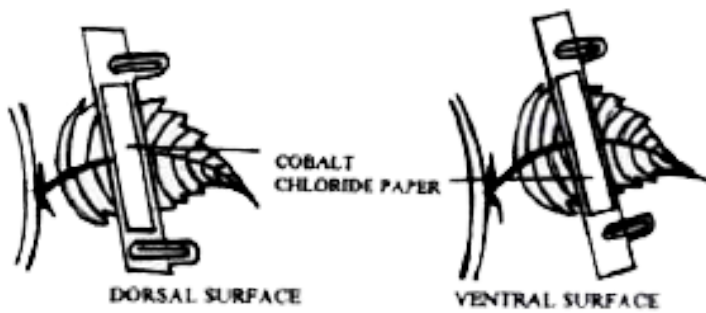
D. The plant should be placed in dark for 24 hours for the roots to absorb water .

Answer:



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36. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



What is the aim of the above experiment ?

- A. To prove that more transpiration occurs from the lower surface of a dicot leaf.
- B. To prove that more transpiration occurs from the upper surface of a dicot leaf.
- C. To prove that transpiration is equal on both sides of the leaf.

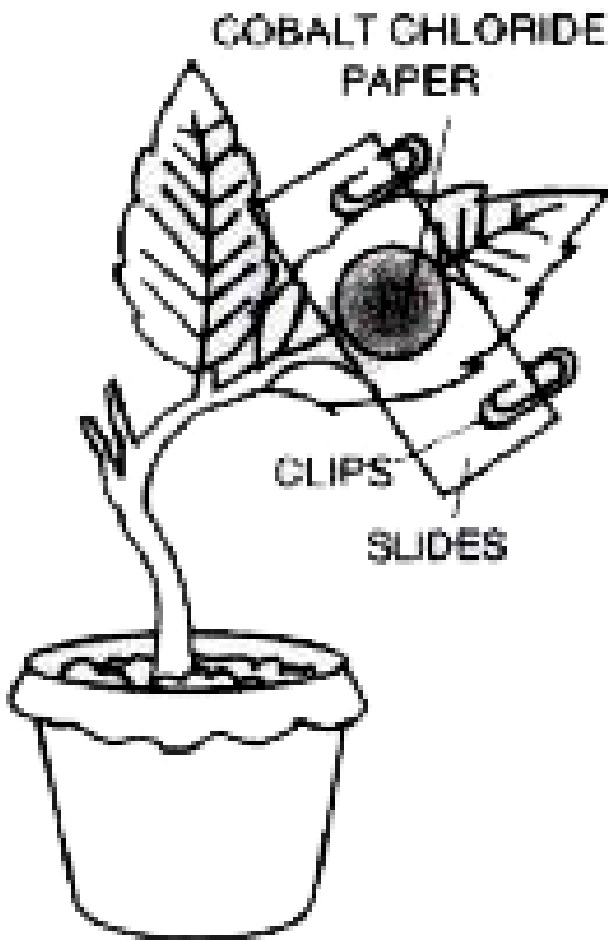
D. To prove that transpiration does not take place in a dicot leaf.

Answer:



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37. Given below is the diagram of an experimental set-up to study the process of transpiration in plants. Study the same and then answer the questions that follow :



What is the colour of dry cobalt chloride paper?

A. Pink

B. Blue

C. Brown

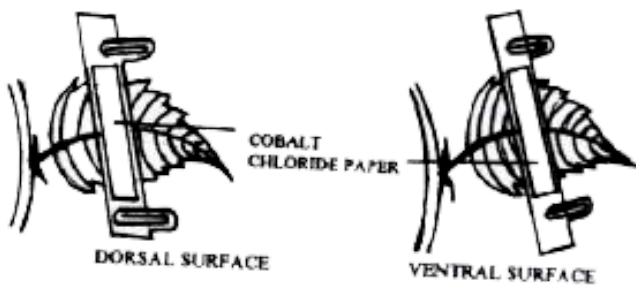
D. White

Answer:



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38. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



What would you observe in the experimental set up after an hour? Give a reason to support your answer.

A. Upper surface - Pink, Lower surface -Blue

B. Upper surface - White , Lower surface -

Blue

C. Upper surface - less pink , Lower surface -

more pink

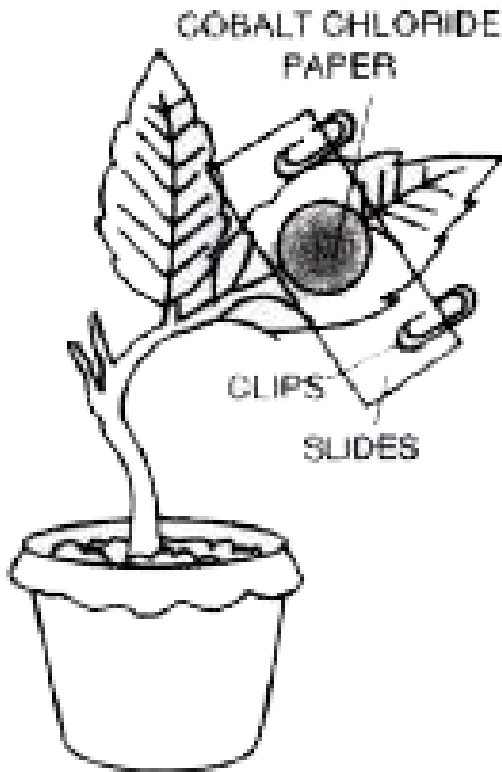
D. Upper surface - more pink , Lower surface -less pink

Answer:



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39. Given below is the diagram of an experimental set-up to study the process of transpiration in plants. Study the same and then answer the questions that follow :



Why are glass slides placed over the dry cobalt chloride papers ?

A. Narrow leaves, Thin cuticle

B. Fewer stomata , Broad lamina of leaves

C. Thin cuticle , Sunken stomata.

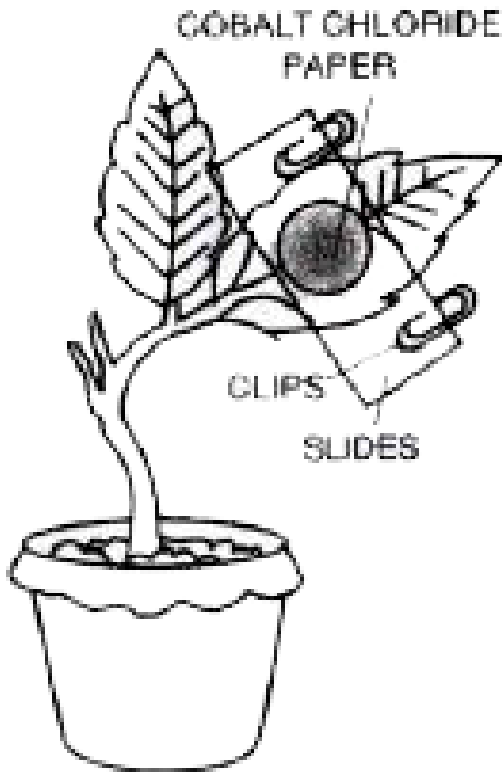
D. Narrow leaves, Fewer stomata

Answer:



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40. Given below is the diagram of an experimental set-up to study the process of transpiration in plants. Study the same and then answer the questions that follow :



Why are glass slides placed over the dry cobalt chloride papers ?

A. High humidity in the air and low temperature .

B. Less humidity in the air and decrease in atmospheric pressure.

C. Bright sunlight and high temperature

D. More wind and low intensity of sunlight.

Answer:



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