



BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE QUESTION PAPER 3

Section I

1. Give the biological/technical terms for the following:

The stage of cell division in which the nuclear membrane disappears and the chromosomes become short and thick.



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2. The exchange of chromatid parts between the maternal and paternal chromatids of a pair of homologous chromosomes during meiosis.



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3. Rewrite by inserting key word in the space indicated by '^'.

Osmosis is the movement of water molecules from its region of high concentration to its region of low concentration through a ^ membrane .



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4. Name the following :

The process by which root hairs absorb water from the soil.



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5. The permanently open structures seen on the bark of an old woody stem



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6. Mention the exact function of:
Hydathodes.



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7. define Iris.



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8. Define Eustachian tube.



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9. Define Lymphocytes.



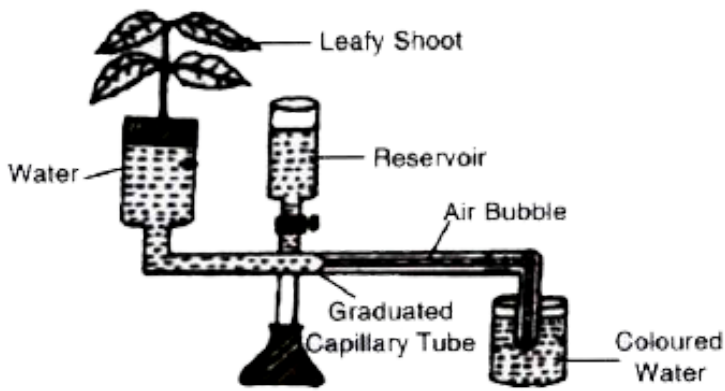
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10. Define Coronary artery



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11. The diagram of an apparatus given below demonstrates a particular process in plants. Study the same and answer the questions that follow :



Name the apparatus.

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12. Karyokinesis, S-phase, cytokinesis, G_1 -phase, G_2 -phase (cell cycle).

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13. Write in a logical sequence

Endodermis, Cortex, Soil water, Xylem, Root hair



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14. Write in a logical sequence

Cortical cells, roots hair, soil water, endodermis, xylem (entry of water into the plant from the soil).



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15. Rewrite in a correct logical sequence :

Pinna, cochlea, tympanum, ear ossicles,
auditory canal (route through which
vibrations of sound enters the ear).



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16. Rewrite in a correct logical sequence :

Pinna, cochlea, tympanum, ear ossicles,
auditory canal (route through which
vibrations of sound enters the ear).





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17. Differentiate between the following pairs on the basis of what is mentioned within the bracket.

Turgor pressure and wall pressure (Explain)



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18. Differentiate between the following pair on the basis of what is mentioned within bracket

photolysis and photophosphorylation (definition)



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19. Ventricular systole and Ventricular diastole.
(Type of heart sound produced)



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20. Differentiate between the following pairs on the basis of what is indicated within the

brackets: Bicuspid valve and tricuspid valve.

(Function)



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21. Tabulate differences between:

LUBB and DUP (Names of valves whose closure produce sound)



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22. Give specific/biological reasons for the following statements.

A person after consuming alcohol walks clumsily.



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23. Give biological reason for the following:

The wall of the ventricle is thicker than the auricles,



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24. Give biological reason for the following:

The left ventricle of the heart has a thicker wall than the right ventricle.



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25. Xerophytes have their leaves modified to spines or reduced in size. Explain.



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26. Give reason for the following

Green leaves are thin and broad.



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27. Give exact location and function of

Thylakoids



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28. State the main function of

(i) Guard cells.

(ii) Thrombocytes.

(iii) Chordae tendineae.

(iv) beta-cells of pancreas.

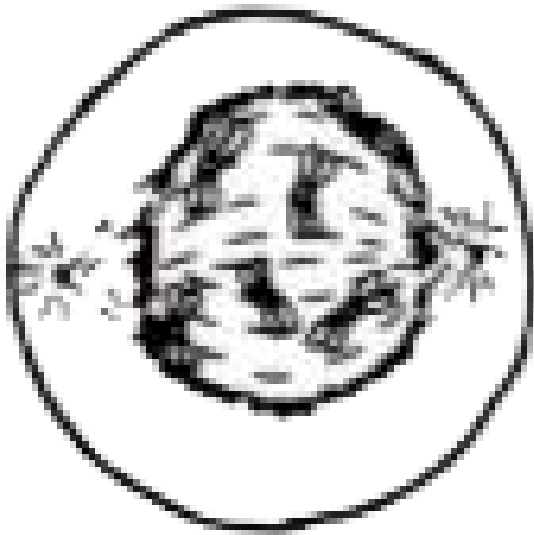
(v) Cerebrospinal fluid.



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Section II

1. The given diagram shows a stage during mitotic division in an animal cell:



Identify the stage. Give a reason to support your answer.



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2. State the main function of:

(i) Erythrocytes

(ii) Lymph

(iii) Nephron.

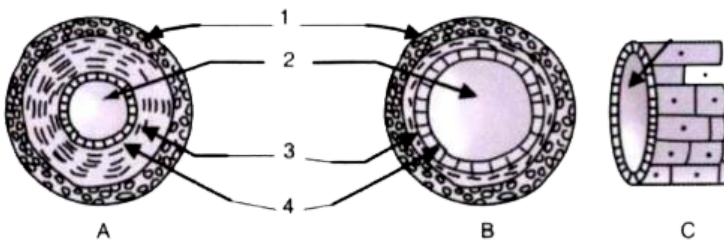
(iv) Medulla oblongata.

(v) Retina



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3. The figures given below are cross-sections of blood vessels



Identify the blood vessels A B and C.

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4. Explain the following term :

Osmosis

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5. Explain the following term :

Turgor pressure.



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6. Explain the term root pressure.



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7. State whether true or false. Rewrite the false statements in their correct form :

Bleeding in plants takes place because of reduced root pressure.



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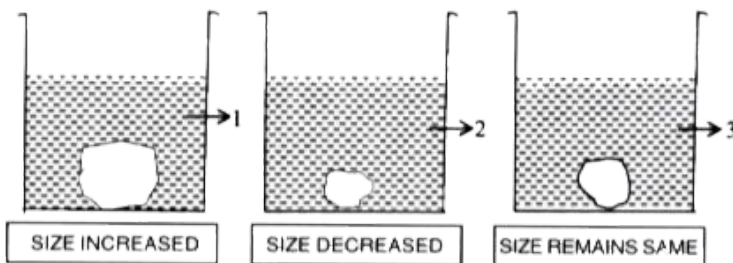
8. Define the following
Photophosphorylation.



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9. A candidate in order to study the process of osmosis has taken 3 potato cubes and put

them in 3 different beakers containing 3 different solutions. After 24 hours, in the first beaker, the potato cube increased in size, in the second beaker, the potato cube decreased in size and in the third beaker there was no change in the size of the potato cube. The following diagram shows the result of the same experiment :



Give the technical terms of the solutions used in beakers, 1 , 2 and 3 .



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10. Name the following:

The respiratory pigment present in erythrocytes.



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11. The phase of cardiac cycle in which the auricles contract.



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12. The blood vessel which carries oxygenated blood to the liver.



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13. Name the following:

The vein that carries oxygenated blood.



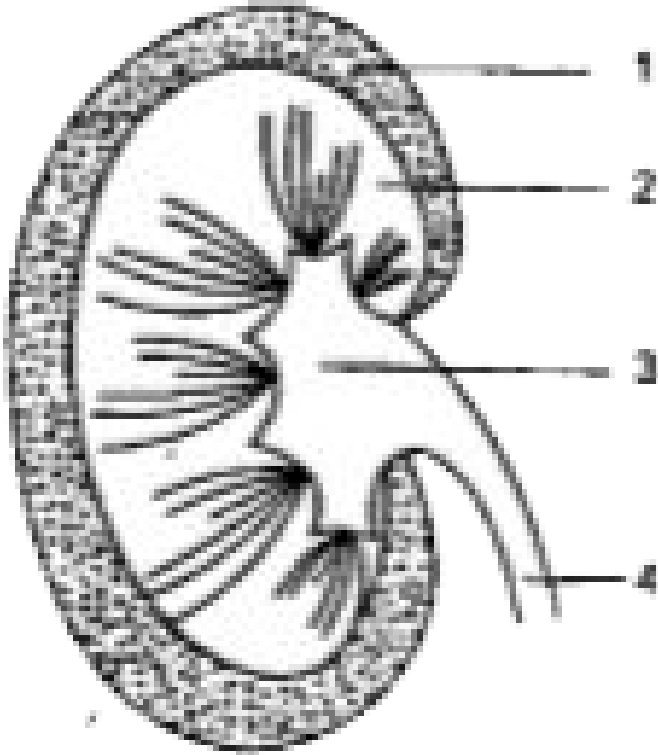
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14. Covering of the lungs is called



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15. The diagram given below shows a section of a human kidney. Study the diagram carefully and answer the questions that follow:



(i) Label the parts numbered 1 to 4.

(ii) Why does part "2" have a striped appearance?

(iii) What is the fluid that passes down part: '4'
? Name the main nitrogenous waste present
in it.

(iv) Mention the structural and functional unit of kidneys.

(v) Name the two major steps in the formation of the fluid mentioned



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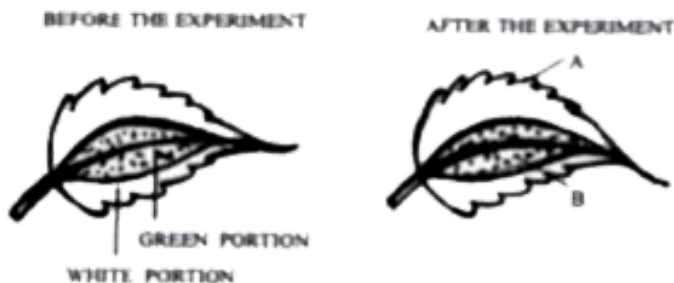
16. Match the items given in Column A with the most appropriate ones in Column B and rewrite the correct matching pairs .

Column A	Column B
(i) Cretinism	(a) Hypersecretion of adrenal cortex
(ii) Diabetes insipidus	(b) Hyposecretion of thyroxine
(iii) Exophthalmic goitre	(c) Hyposecretion of growth hormone
(iv) Adrenal virilism	(d) Hyposecretion of vasopressin
(v) Dwarfism	(e) Hyposecretion of adrenal cortex
	(f) Hypersecretion of growth hormone
	(g) Hypersecretion of thyroxine



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17. The diagram given below is an experiment conducted to study a factor necessary for photosynthesis. Observe the diagram and then answer the following questions



What is the aim of the experiment



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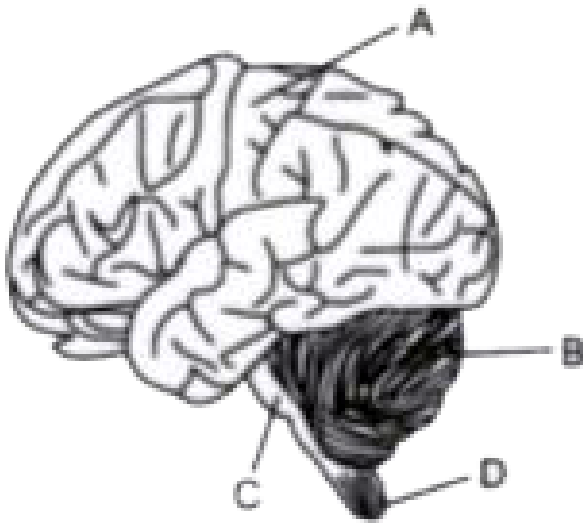
18. What do the following abbreviations stand for :

(i) AMP (ii) ADP (iii) ATP



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19. The following diagram represents the human brain as seen in an external view. Study the same and then answer the questions that follow :



(i) Name the part labelled A, B, C and D.

(ii) Mention the difference in the arrangement of the nerve cells in the parts marked 'A' and 'D'

(iii) What is the main function of the parts marked 'C' and 'D'?

(iv) Name the sheet of nerve fibres that

connect the two halves of the part labelled.

(v) Name the basic unit of brain.



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20. Account for the following briefly :

Herbaceous plants growing in well watered soils are found to wilt on a hot day.



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21. Jamming of wooden doors and windows takes place during rainy season. Give reason



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22. Comment upon the following :

The leaves of plants roll up on a bright sunny day.



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23. Give reason for the following

Animals owe their existence to chlorophyll.



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

Marine fish when placed in tap water bursts because of:



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