BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SELF ASSESSMENT PAPER 2

Section I 1 A Name The Following

1. The cell body of a nerve cell

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2. Name the following:

The wax-like layer on the epidermis of leaves which reduces transpiration.

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3. Name the following:

The hormone that regulates the basal metabolic rate.

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4. Which of the following blood cells are responsible for the clotting of blood?

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5. Name the knot like mass of blood capillaries inside the Bowman's capsule.

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Section I 1 B Choose The Correct Answer From The Four Optioms Given Below

1. The cell component visible only during cell division :

A. Mitochondria

B. Chloroplast

C. Chromosome

D. Chromatin

Answer:

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2. Pulse wave is mainly caused by the :

A. Systole of atria

B. Diastole of atria

C. Systole of the left ventricle

D. Systole of the right ventricle

Answer:

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3. Learning is related with:

A. Cerebrum

B. Cerebellum

C. Medulla oblongata

D. Hypothalamus

Answer:

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4. The part of the human eye where rod and cone cells are located is the:

1)Retina

2)Cornea

3)Choroid

4)Sclera

A. Retina

B. Cornea

C. Choroid

D. Sdera

Answer:

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5. The gland which secretes both hormone and enzyme is the:

A. Pituitaryy

B. Pancreas

C. Thyroid

D. Adrenal

Answer:

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Section I 1 C Rewrite And Complete The Following Sentences By Inserting The Correct Word In The Space Indicated

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

The phenomenone of loss of water through a

cut stem or injured part of plant is called ..... .

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2. _____ helps in conduction of nerve impulses.

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3. A fluid that occupies the larger cavity of the eye ball behind the lens is .....

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4. Fill in the blanks :

Oxygen combines with haemoglobin resent in RBC and forms .....

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5. The size of pupil is controlled by the

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Section I 1 D

1. State the main function of the following:

Bicuspid valve

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2. State the main function of the following:

Henles loop

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3. State the main function of the following:

Ear ossicles

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4. State the main function of the following:

ADH

Watch Video Solution

5. State the main function of the following:

Sunken stomata

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Section I 1 E A Pea Plant Which Is Homozygous For Green Pods Which Are Inflated Ggii Is Crossed With A Homozygous Plant For Yellow Pods Which Are Constricted Ggii Answer The Following Questions

1. A pea plant which is homozygous for Green pods which are inflated [GGII) is crossed with a homozygous plant for yellow pods which are constricted (ggii). Answer the following questions:

Give the phenotype and genotype of the F generation. Which type of pollination has occurred to produce F, generation?

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2. A pea plant which is homozygous for Green pods which are inflated [GGII) is crossed with a homozygous plant for yellow pods which are constricted (ggii). Answer the following questions:

Write the phenotypic ratio of the F generation.

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3. A pea plant which is homozygous for Green pods which are inflated [GGII) is crossed with a homozygous plant for yellow pods which are constricted (ggii). Answer the following questions:

Write the possible combinations of the

gametes that can be obtained if two F hybrid plants are crossed.

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4. A pea plant which is homozygous for Green pods which are inflated [GGII) is crossed with a homozygous plant for yellow pods which are constricted (ggii). Answer the following questions:

State Mendel's law of 'Segregation of Gametes'.

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5. A pea plant which is homozygous for Green pods which are inflated [GGII) is crossed with a homozygous plant for yellow pods which are constricted (ggii). Answer the following questions:

What is the scientific name of the plant which Mendel used for his experiments on inheritance ?

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Section I 1 F

1. Given below is an example of certain structures and their special functional activities. For example: Eye and vision. On a similar pattern, complete the following:

(i) Neutrophils:

(ii) Ureter:

(iii) Neurotransmitters:

(iv) Iris of the eye:

(v) Placenta:

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2. Given below is an example of certain structures and their special functional activities.

For example : Eye and vision, On a similar pattern complete the following:

Ureter: .....

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3. Given below is an example of certain structures and their special functional

activities. For example: Eye and vision. On a similar pattern, complete the following:

(i) Neutrophils:

(ii) Ureter:

(iii) Neurotransmitters:

(iv) Iris of the eye:

(v) Placenta:

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4. Given below is an example of certain structures and their special functional

activities.

For example : Eye and vision, On a similar pattern complete the following:

Iris of the eye : .....

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5. Given below is an example of certain structures and their special functional activities. For example: Eye and vision. On a similar pattern, complete the following:

Thyroid gland .....

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Section I 1 G Given Below Are Sets Of Five Terms Rewrite Each Term In The Logical Sequence One Example Is Done For You Br Example Cortical Cells Root Hair Xylem Soil Water Endodermis Absorption Of Water By Plants Br Answer Soil Water Ro

1. Arrange in sequence:

Metaphase, interphase, anaphase, prophase, telophase (cell division)

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2. Rewrite the following in correct order as to be in a logical sequence :

Implantation parturition, ovulation, gestation fertilisation (stages leading to formation of foetus and birth).

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3. Rewrite in a correct logical sequence :

Oval window. Tympanum, Cochlea, Auditory canal, Ear ossicles (path through which a

vibration of sound is transferred in the human ear).

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

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5. Given below is a set of five terms. Rewrite the terms in logical sequence as directed at

the end of each statement,

Renal vein, Renal artery. Afferent arteriole, Efferent arteriole, Glomerulus (Pathway of blood through glomerulus).

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Section I 1 H

1. Given below are six sets with four terms each. In each set a term is an odd one and cannot be grouped in the same category to

which the other three belong. Identify the odd one in each set and name the category to which the remaining three belong. The first has been done for you as an example.

No.	Set	Odd one	Category
e.g. :	Cell wall, large vacuole, plastids, centrosome	Centrosome	Parts of plant cell
(i)	Cerebrum, cerebellum, thalamus, hypothalamus		
(ii)	Ovary, ureter, fallopian tube, uterus		
(iii)	Adrenal gland, liver, thyroid gland, pituitary gland		
(iv)	Malleus, pinna, incus, stapes		
(v)	Haemophilia, colour blindness, albinism, night blindness		

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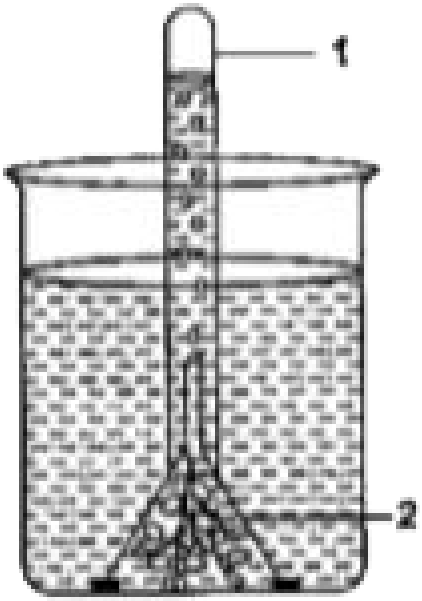
Section Ii 2 A

1. The following diagram demonstrates a physiological process taking place in green plants. The whole set up was placed in bright sunlight for several hours. Study the diagram and answer the questions that follow:



What aspect of the physiological process is being examined?

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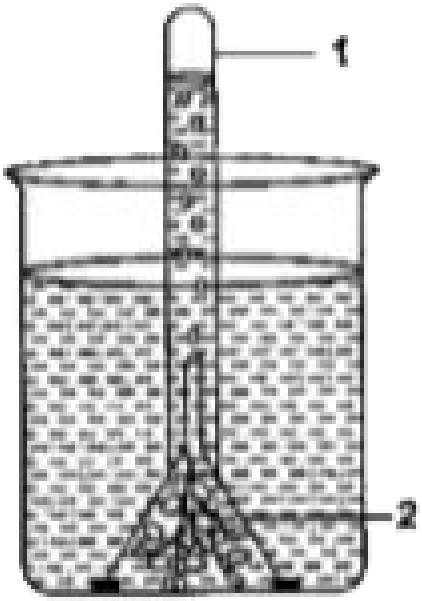
2. The following diagram demonstrates a physiological process taking place in green plants. The whole set up was placed in bright sunlight for several hours. Study the diagram and answer the questions that follow:



Explain the physiological process mentioned in (i) above.

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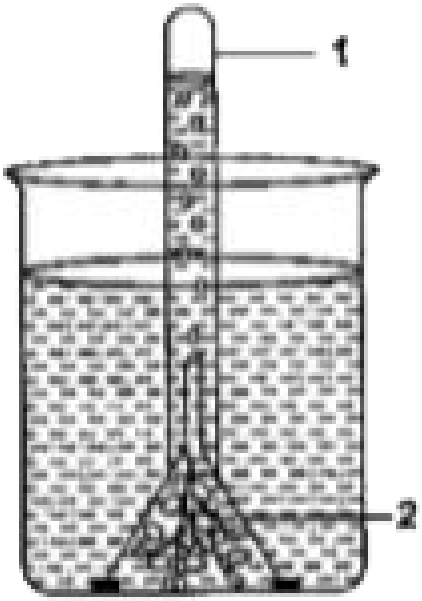
3. The following diagram demonstrates a physiological process taking place in green plants. The whole set up was placed in bright sunlight for several hours. Study the diagram and answer the questions that follow:



Label the parts numbered 1 and 2in the diagram.

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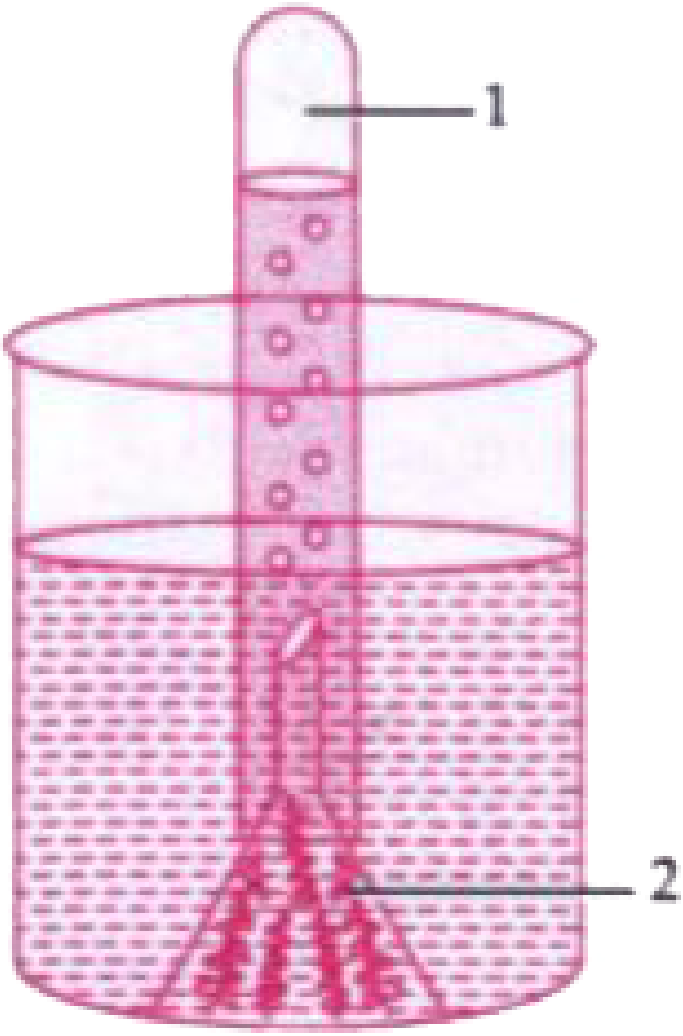
4. The following diagram demonstrates a physiological process taking place in green plants. The whole set up was placed in bright sunlight for several hours. Study the diagram and answer the questions that follow :



Write a well-balanced chemical equation for the physiological process

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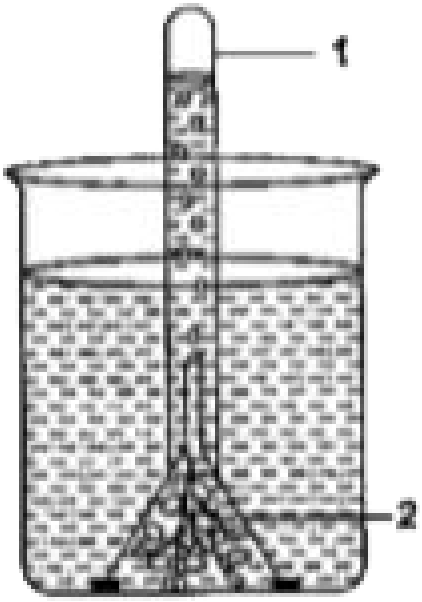
5. The following diagram demonstrates a physiological process taking place in green plants. The whole set up was placed in bright sunlight for several hours. Study the diagram and answer the questions that follow:



What would happen to the rate of bubbling of the gan if a pinch of sodiam bicarbonate is added to the water in the beaker? Explain your answer

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Section Ii 2 B

1. Give technical term for:

A membrane which allows the passage of molecules selectively.

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2. Give appropriate biological technical terms for the following:

Cellular components of blood containing haemoglobin.

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3. Give technical term to the following:

The structure that carries visual stimuli from retina to the brain.

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4. Give biological technical terms for the following

Squeezing out of white blood cells from the capillaries into the surrounding tissues,

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5. Give technical term to the following:

Protective membranes covering the human

brain and spinal cord.

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6. Give technical term to the following:

Eye lens losing flexibility resulting in a kind of long-sightedness in elderly people.

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7. Give technicallbiological term for the following:

(I) Hormone which stimulate other endocrine glands to produce their specific hormones.

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

The site of photosynthesis in a plant cell.

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9. Name the following :

An apparatus to compare the rate of transpiration in a cut shoot.

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10. Give biological/ technical terms for the following:

A pair of corresponding chromosomes of the same size and shape, one from each parent.

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Section Ii 3 A

1. Study the diagram given below and then answer the questions that follow :

(i) Name the part labelled A. Name any two hormones produced by the part labelled A.

(ii) What happens to the part labelled B if :

(1) fertilisation takes place?

(2) fertilisation does not take place ?

(iii) Where does fertilisation occur ?

(iv) Draw a neat diagram of the human sperm as seen under high magnification and label the following parts: (a) Acrosome (b) Mitochondria.

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2. Study the diagram given below and then answer the questions that follow :

(i) Name the part labelled A. Name any two hormones produced by the part labelled A.

(ii) What happens to the part labelled B if :

(1) fertilisation takes place?

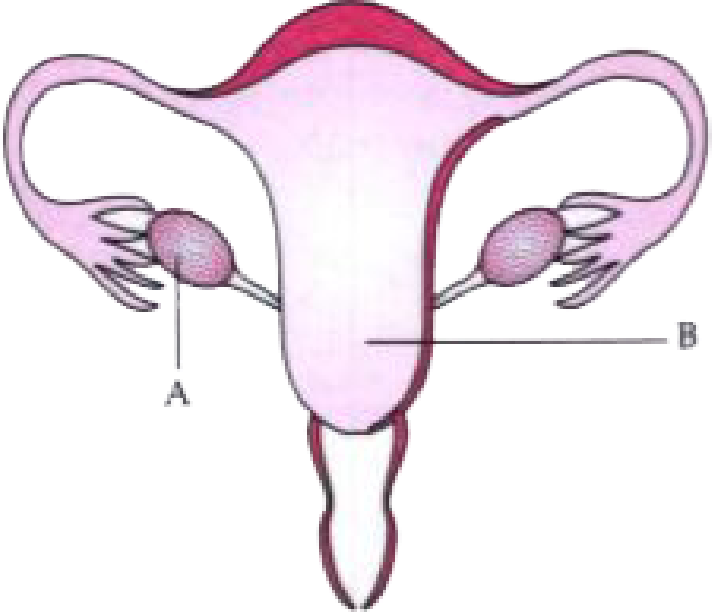
(2) fertilisation does not take place ?

(iii) Where does fertilisation occur ?

(iv) Draw a neat diagram of the human sperm as seen under high magnification and label the following parts: (a) Acrosome (b) Mitochondria.

Watch Video Solution

3. Study the diagram given below and then answer the questions that follow :



Where does fertilization occur ?

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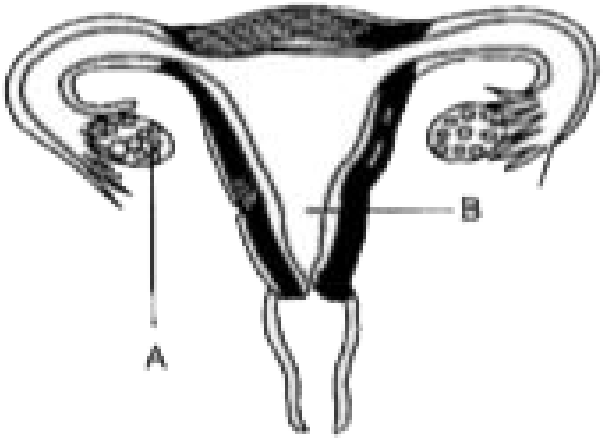
4. Study the diagram given alongside and answer the questions that follow:



Draw a neat diagram of the human sperm as seen under high magnification and label the following parts.

(a) Acrosome

(b) Mitochondria

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Section Ii 3 B

1. Give one difference between each of the following pairs on the basis of what is given in the brackets:

Mitral valve and Aortic semilunar valve(location)

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2. Differentiate between the following pairs on the basis of what is mentioned in the brackets:

Stoma and Stroma (Structure)

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3. Give one difference between each of the following pairs on the basis of what is given in the brackets:

turgid cell and Plasmolysed cell (tonicity of the surrounding solution)

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4. Differentiate between the following pairs on the basis of what is mentioned in the brackets: Transpiration and Guttation (Structures involved)

Watch Video Solution

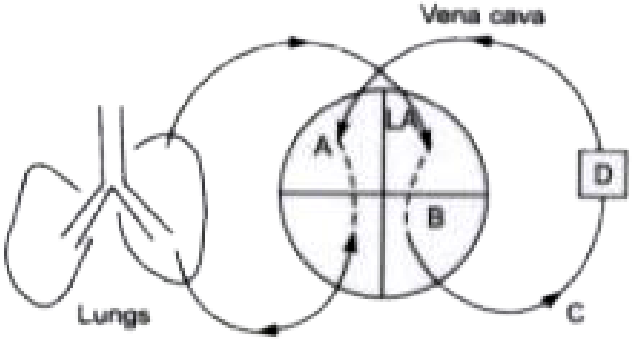
5. Differentiate between the following pairs on the basis of what is mentioned in brackets : Diabetes mellitus and Diabetes insipidus (reason/cause)

Watch Video Solution

Section Ii 4 A

1. Given alongside a schematic representation of the circulatory system in man. Study the same and answer the question that follows.

-



Label the parts A to D indicated in the diagram.

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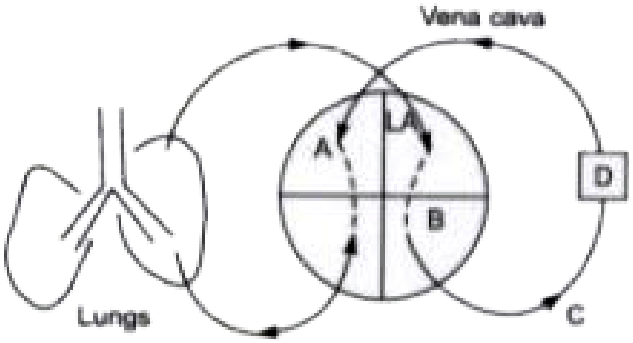
2. Given alongside a schematic representation of the circulatory system in man. Study the same and answer the question that follows.

-



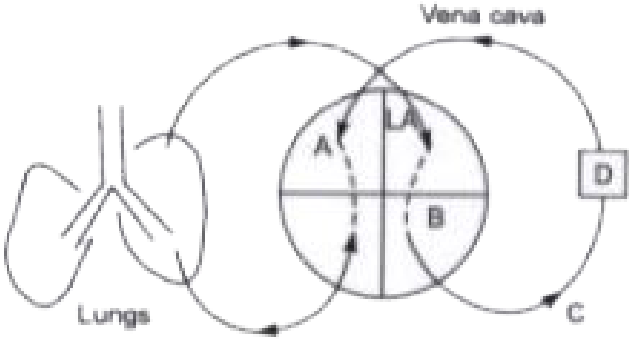
Give one difference between the parts A and B based on

(a) their structure

(b) the nature of blood flowing through them

Watch Video Solution

3. Given alongside a schematic representation of the circulatory system in man. Study the same and answer the question that follows.

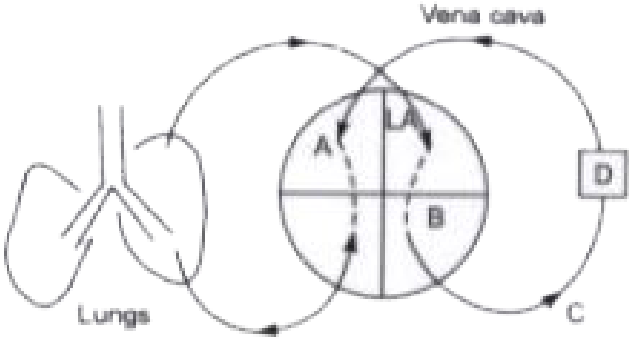


What is the specific name of the type of blood

circulation that takes place between the heart and lungs?

Watch Video Solution

4. Given alongside a schematic representation of the circulatory system in man. Study the same and answer the question that follows.



Name the valve found at the beginning of the part labelled C.

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Section Ii 4 B

1. Explain the following term :

Osmosis

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2. Briefly explain the following:

Photophosphorylation

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3. Briefly explain the following:

Pulse

Watch Video Solution

4. Briefly explain the following:

Reflex action

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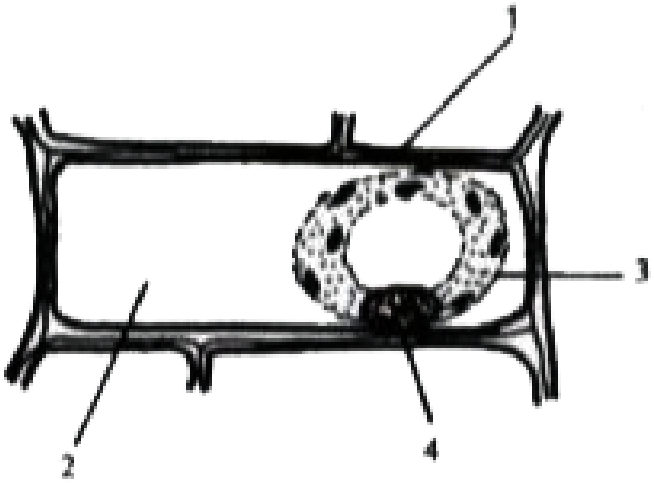
5. Briefly explain the following:

Synapse

Watch Video Solution

Section Ii 5 A

1. The diagram given below represents a plant cell after being placed in a strong sugar solution . Study the diagram and answer the questions that follow:



What is the state of the cell shown in the diagram?

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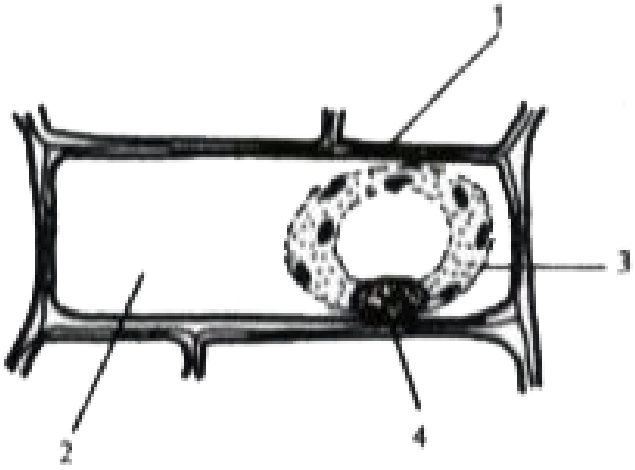
2. The diagram given below represents a plant cell after being placed in a strong sugar solution . Study the diagram and answer the questions that follow:



Name the structure that acts as a selectively permeable membrane.

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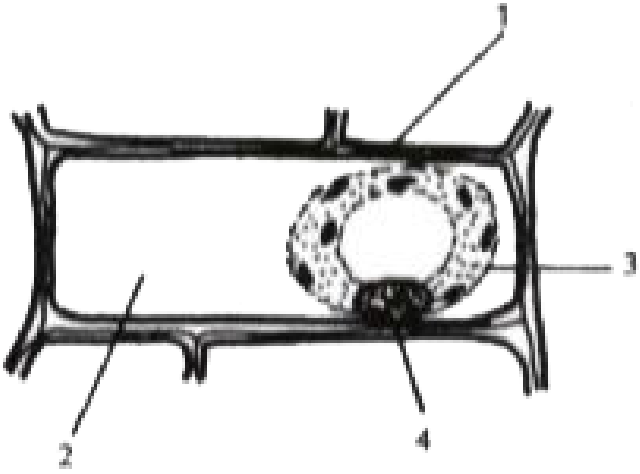
3. The diagram given below represents a plant cell after being placed in a strong sugar solution . Study the diagram and answer the questions that follow:



Label the parts numbered 1 to 4 in the diagram.

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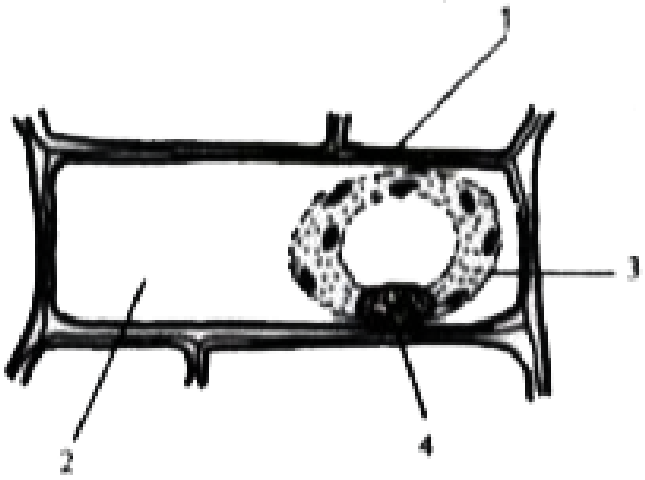
4. The diagram given below represents a plant cell after being placed in a strong sugar solution . Study the diagram and answer the questions that follow:



How can the above cell be brought back to its

original condition? Mention the scientific term for the recovery of the cell.

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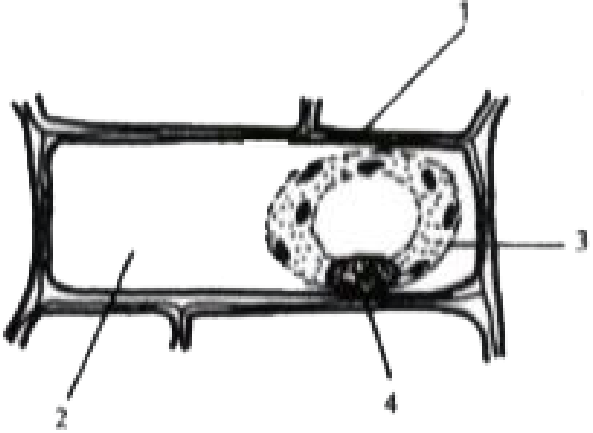
5. The diagram given below represents a plant cell after being placed in a strong sugar solution . Study the diagram and answer the questions that follow:



State any two features of the above plant cell which is not present in animal cells.

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Section Ii 5 B Give Biological Reasons For The Following

1. Draw a neat labelled diagram to show the metaphase stage of mitosis in an animal cell having four chromosomes.

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2. Why is pituitary gland called the "master gland" ?

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3. Gametes have a haploid number of chromosomes.

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4. Give biological reason for the following:

Throat infections could lead to ear infections.

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5. Give scientific reasons for the following statements:

Loss of nucleus and mitochondria make erythrocytes more efficient in their function.

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Section Ii 6 A With Reference To The Human Ear Answer The Questions That Follow

1. With reference to the human ear, answer the questions that follow :

Give the technical term for the structure found in the inner ear.

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2. With reference to the human ear, answer the questions that follow :

Name the three small bones present in the middle ear. What is the biological term for them collectively?

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3. With reference to the human ear, answer the questions that follow :

Name the part of the ear associated with

(a) static balance (6) hearing (c) dynamic balance.

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4. With reference to the human ear, answer the questions that follow :

Name the nerve, which transmits messages from the ear to the brain.

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Section Ii 6 B Give Reasons For The Following

1. Comment upon the following :

People living in hilly regions usually suffer from simple goitre.

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2. Comment upon the following:

The urine is slightly thicker in summer than in winter.

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3. Give reasons :

Potato cubes when placed in water become firm and increase in size.

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4. A matured mammalian erythrocyte lacks nucleus and mitochondria.

Watch Video Solution

5. Give reason for the following

Photosynthesis is considered as a procoss supporting all life on earth.

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Section Ii 7 A With Reference To The Functioning Of The Eye Answer The Following Questions

1. What is meant by power of accommodation of the eye ? Name the muscles of the eye responsible for the same.

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2. With reference to the functioning of the eye, answer the questions that follow :

What is the shape of the lens during :

(a) near vision (b) distant vision ?

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3. With reference to the functioning of the eye, answer the questions that follow :

Name the two structures in the eye responsible for bringing about the change in the shape of the lens.

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4. With reference to the functioning of the eye, answer the questions that follow :

Name the cells of the retina and their respective pigments which get activated :

(a) in the dark (b) in light.

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5. What are the possible reasons of the eye defect myopia.

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Section Ii 7 B

1. Draw a neat diagram of a neuron and label the following parts: (1) Node of Ranvier (2) Nisel's granules (3) Cyton

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2. Name the following: The parts of human brain concernud with

(a) seat of memory (b) coordinates muscular activity.

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3. Name the point of contact between two neurons.

Watch Video Solution

4. Name the following: A neurotransmitter stored at the terminal end of the axon.

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5. Name the biological term given to the protective membranes of the brain spinalcord.

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