



# **BIOLOGY**

# BOOKS - EVERGREEN BIOLOGY (ENGLISH)

# **SELF ASSESSMENT PAPER 3**

# Section I

1. Draw a labelled diagram of inner ear. Name

the part of the inner ear that is responsible

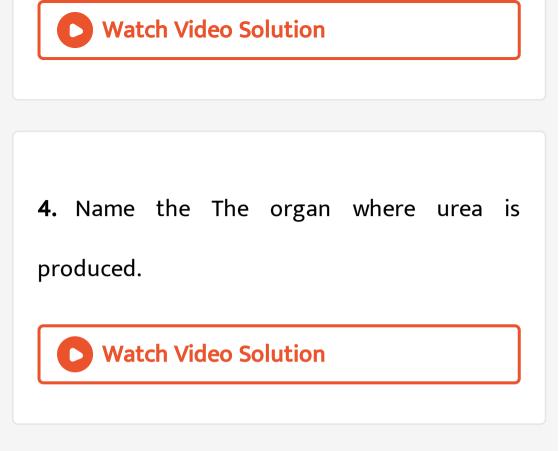
for static balance in human beings.



2. Hormone which helps to increase the reabsorption of water from the kidney tubules.AD

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**3.** The phase of cardiac cycle in which the auricles contract.



**5.** Name the following :

The phenomenon by which living or dead

plant cells absorb water by surface attraction .

**6.** Blinking, Knitting without looking, Smiling, Blushing, Crying

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7. Myopia, Cataract, Hypermetropia, Squint,

Cretinism

8. Choose the odd term: Dendrites, Medullary

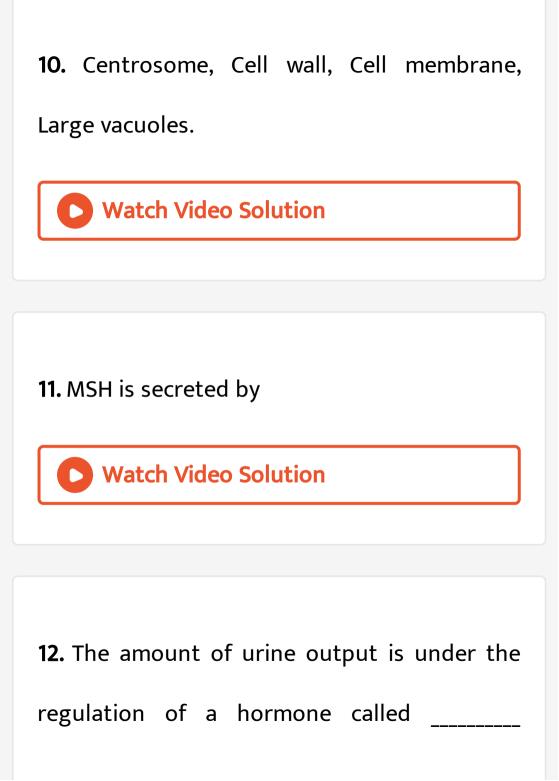
sheath, Axon, Spinal cord.



# 9. Vasopressin, Growth hormone, TSH, ACTH,

FSH





secreted by the\_\_\_\_\_ lobe of the pituitary

gland. If this hormone secretion is reduced,

there is an increased production of urine. This

disorder is called \_\_\_\_\_\_.



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**13.** Complete the following paragraph by filling in the blanks (1) to (V) with appropriate words: The amount of urine output is under the regulation of a hormone called (i)\_\_\_\_\_ secreted by the (ii)\_\_\_\_\_lobe of the

pituitary gland. If this hormone secretion is
reduced, there is an increased production of
urine. This disorder is called (iii)
Sometimes excess glucose is passed with urine
due to hyposecretion of another hormone
called (iv) leading to the cause of a
disease called (v)
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**14.** Complete the following paragraph by filling in the blanks (1) to (V) with appropriate words:

The amount of urine output is under the regulation of a hormone called (i)\_\_\_\_\_ secreted by the (ii)\_\_\_\_lobe of the pituitary gland. If this hormone secretion is reduced, there is an increased production of urine. This disorder is called (iii) . Sometimes excess glucose is passed with urine due to hyposecretion of another hormone called (iv) \_\_\_\_\_ leading to the cause of a disease called (v)\_\_\_\_\_

15. Which category comes after class in

descending order in taxonomic hierarchy

A. Genus

B. Family

C. Order

**D.** Species

#### Answer:

**16.** Choose the correct answer to the given statement from the four choices given below the statement:

The cerebral hemispheres in mammals are connected by:

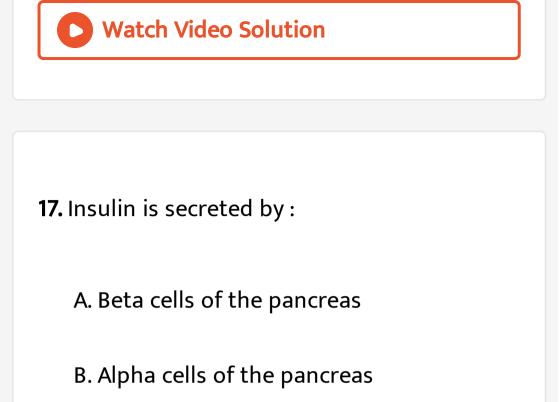
A. Corpus luteum

B. Hypothalamus

C. Pons varolii

D. Corpus callosum

Answer:



- C. Delta cells of the pancreas
- D. None of the above

#### **Answer:**



**18.** Choose the correct answer from the given four options :

A destarched plant is one whose

A. Leaves are free from chlorophyll

B. Aerial parts are free from starch

C. Leaves are free from starch .

D. Plant is free from starch

#### **Answer:**

**19.** Choose the correct answer from the given four options :

The individual fatened stacks of membranous structures inside the chloroplasts are known as

A. Grana

B. Stroma

C. Thylakoids

D. Cristae Al

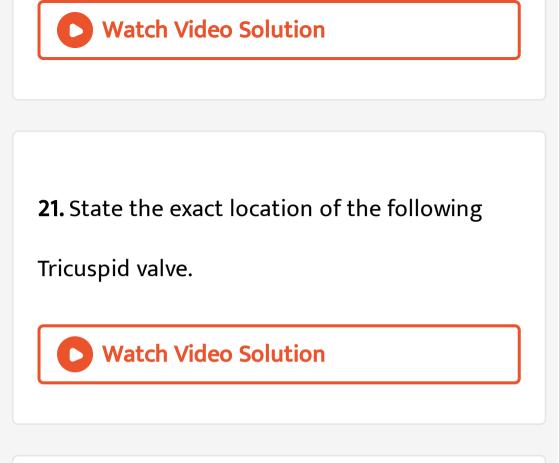




20. Gigantism and acromegaly are due to

- A. Hyposecretion of Thyroxine
- B. Hyposecretion of Growth hormone
- C. Hypersecretion of Thyroxine
- D. Hypersecretion of Growth hormone





**22.** (b) Mention the exact location of the following:

- (i) Proximal convoluted tubule.
- (ii) Lacrimal gland

(iii) Malleus

(iv) Hydathodes

(v) Semilunar valve

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23. Mention the exact location of the following

structures : Yellow spot.

**24.** (b) Mention the exact location of the following:

- (i) Proximal convoluted tubule.
- (ii) Lacrimal gland
- (iii) Malleus
- (iv) Hydathodes
- (v) Semilunar valve



**25.** Give the exact location of the following :

Adrenal gland

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**26.** Given below are five groups of terms. In each group arrange and rewrite the terms in the correct order so as to be in a logical sequence.

For example:

Question : Implantation, Parturition,

Ovulation, Gestation, Fertilization.

Answer: Ovulation, Fertilization, Implantation,

Gestation, Parturition.

Spongy cells, Upper epidermis, Stoma, Palisade

tissue, Substomatal space.

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## 27. Re-write in correct logical sequence : Spinal

cord, Motor neuron, Receptor, Effector,

Sensory neuron.



**28.** Write in a logical sequence

Endodermis, Cortex, Soil water, Xylem, Root

hair

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29. Rewrite the terms in correct order so as to

be in a logical sequence. Metaphase,

Telophase, Prophase, Anaphase, Cytokinesis.

30. Rewrite the terms in correct order so as to

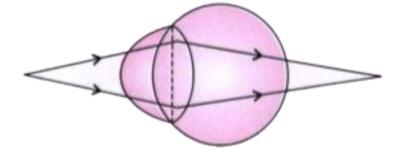
be in a logical sequence.

Intestine, Liver, Intestinal artery, Hepatic vein,

Hepatic portal vein.



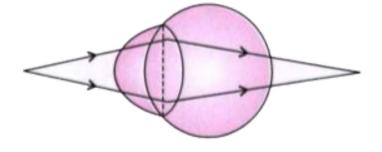
**31.** Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human eye :



### Identify the defect shown in the diagram.



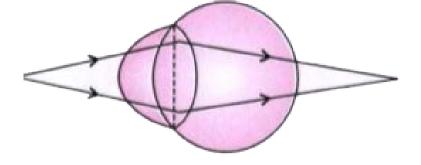
**32.** Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human eye :



Give two possible reasons for the above defect.

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**33.** Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human eye :

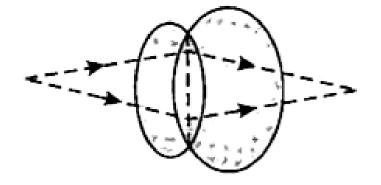


Draw a neat labelled diagram to show how the

above defect can be rectified.

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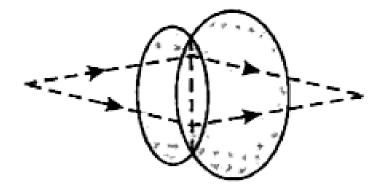
**34.** Study the diagram given below and answer the questions which follow. The diagram is depicting a defect of the human eye.



Name the type of lens used to correct short sightedness.

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**35.** Study the diagram given below and answer the questions which follow. The diagram is depicting a defect of the human eye.



Name the old age eye defect. Why is it caused

?

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**36.** Match the items givenn in Column A with the most appropriate ones in Column B and

### **REWRITE the correct matching pairs:**

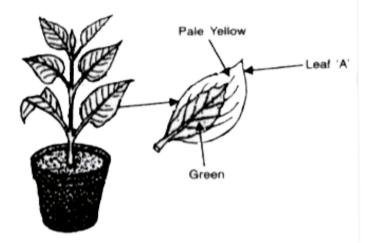
Column A	Column B
(i) Cranial nerves	Testosterone
(ii) Leydig cells	Natural reflex
(iii) Acetylcholine	12 pairs
(iv) Spinal nerves	Prolactin
(v) Sneezing	Neurotransmitter
	18 pairs
	31 pairs
	Conditioned reflex



### Section li

**1.** A potted plant with variegated leaves was taken in order to prove a factor necessary for photosynthesis. The potted plant was kept in the dark for 24 hours and then placed in bright sunlight for a few hours Observe the

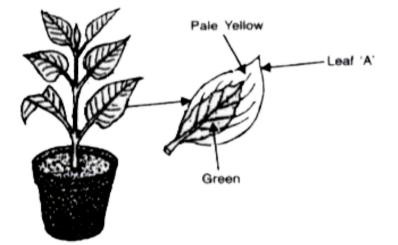
diagrams and answer the questions.



What aspect of photosynthesis is being tested

in the above diagram?

2. A potted plant with variegated leaves was taken in order to prove a factor necessary for photosynthesis. The potted plant was kept in the dark for 24 hours and then placed in bright sunlight for a few hours Observe the diagrams and answer the questions.

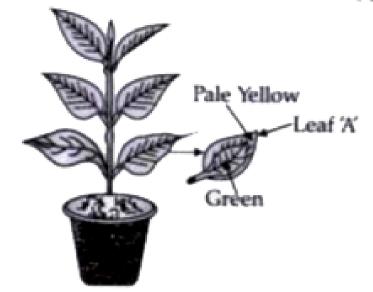


Why was the plant kept in the dark before

beginning the experiment?



**3.** A potted plant was taken in order to prove a factor necessary for photosynthesis. The potted plant was kept in the dark for 24 hours. One of the leaves was covered with black paper in the centre. The potted plant was then placed in sunlight for a few hours.



During the starch test, why was the leaf: (1)

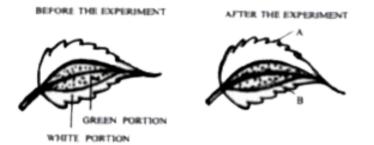
boiled in water (2) boiled in methylated spirit

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**4.** The diagram given below is an experiment conducted to study a factor necessary for

### photosynthesis Observe the diagram and then

answer the following questions



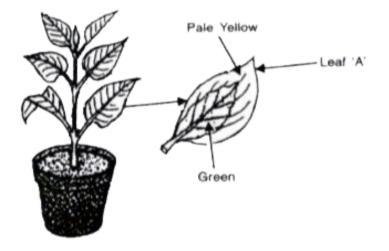
Give a balanced chemical equation to

represent the process of photosynthesis

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**5.** A potted plant with variegated leaves was taken in order to prove a factor necessary for

photosynthesis. The potted plant was kept in the dark for 24 hours and then placed in bright sunlight for a few hours Observe the diagrams and answer the questions.



Draw a neat labelled diagram of a chloroplast



**6.** Explain the following terms:

Plasmolysis

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7. Explain the following term :

Turgor pressure.



**8.** Write short notes on :

Selective reabsorption

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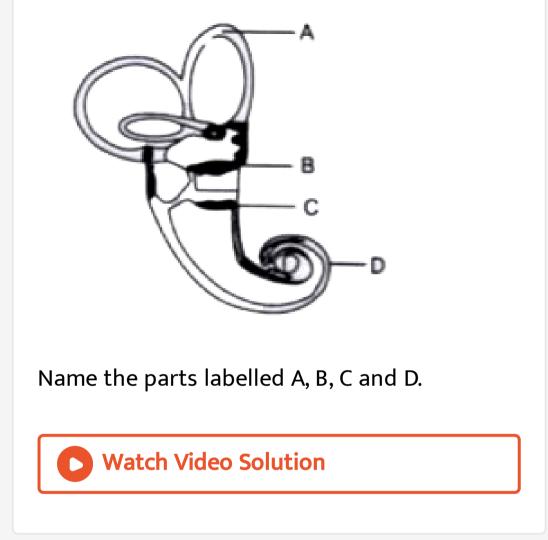
9. Hypotonic and Hypertonic solution

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**10.** Briefly explain the following:

Pulse

**11.** The diagram below represents the structure found in the inner ear. Study the same and then answer the questions which follow:



12. Name the part of the ear responsible for

transmitting impulses to the brain.



13. The diagram below represents the structure found in the inner ear.Study the same and then answer the questions that follow:

# 

Name the part labelled above which is responsible for :

(1) Static equilibrium.

(2) Dynamic equilibrium.

(3) Hearing.



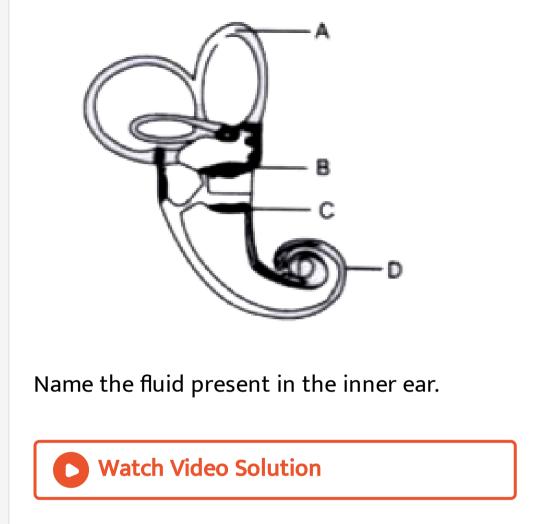


14. Name the audio receptor cells which pick

up vibrations.



**15.** The diagram below represents the structure found in the inner ear. Study the same and then answer the questions which follow:



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

Myopia and Hypermetropia. (Cause of the

defect)



**17.** Differentiate between : Cerebrum and Spinal cord (Arrangement of cytons and axons

of neurons).



**18.** Give one point of difference between the following on the basis of what is given in the brackets:

Red blood corpuscles and white blood corpuscles (origin)

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**19.** Differentiate between :

Karyokinesis and Cytokinesis (Explain the

terms)



20. Give one point of difference between the following on the basis of what is given in the brackets: Light reaction and dark reaction (site of

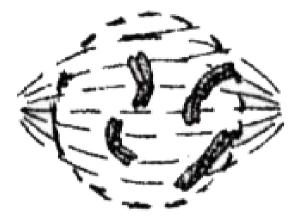
occurrence)

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**21.** Given below is a diagram representing a stage during mitotic cell division.

Study it carefully and answer the questions

that follow:



Is it a plant cell or an animal cell? Give a reason to support your answer.

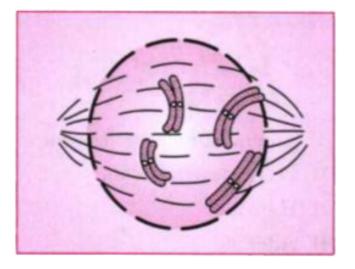


22. Given below is a diagram representing a stage during mitotic cell division.Study it carefully and answer the questions that follow:



Identify the stage shown above.

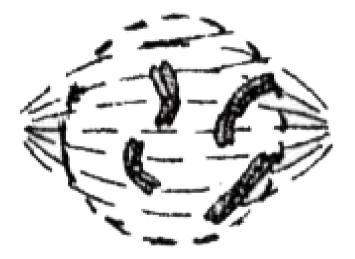
**23.** Given below is a diagram representing a stage during mitotic cell division. Study it carefully and answer the questions that follow



Name the stage that follows the one shown

here. How is that stage identified ?

24. Given below is a diagram representing a stage during mitotic cell division.Study it carefully and answer the questions that follow:

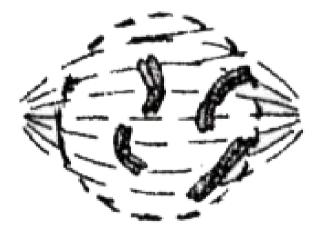


How will you differentiate between mitosis and meiosis on the basis of the chromosome number in the daughter cells?



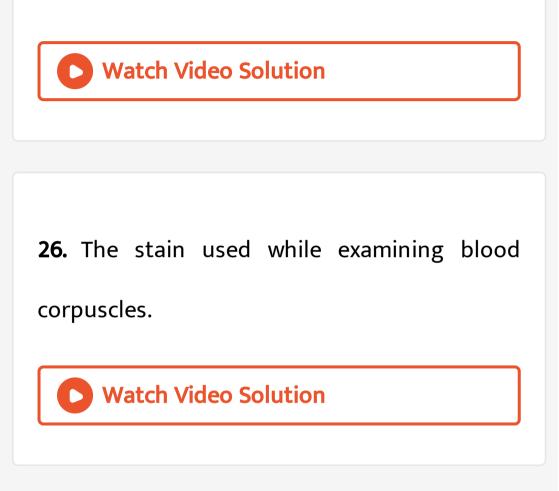


25. Given below is a diagram representing a stage during mitotic cell division.Study it carefully and answer the questions that follow:

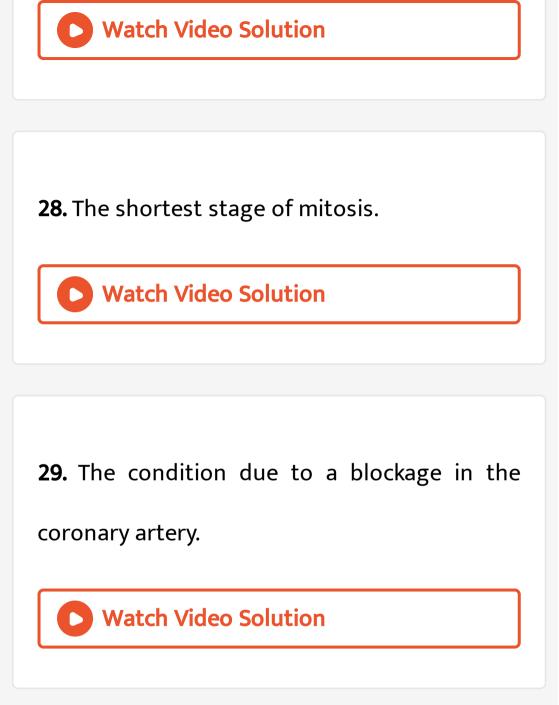


Draw a duplicated chromosome and label its

parts.



**27.** The pressure at the time when the fresh blood is pumped into the arteries.



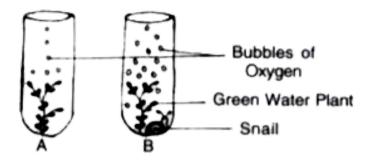
**30.** Give technical term :

Non-identical twins produced by the

fertilisation of two eggs.



**31.** The diagram below shows two test-tubos A and B. Test-tube A contains a green water plant Test-tube B contains both a green water plant and a snail. Both test tubes are kept in sunlight Answer the questions that follow



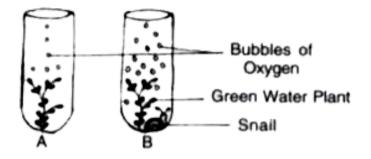
Name the physiological process that releases

the bubbles of oxygen

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**32.** The diagram below shows two test-tubes A and B. Test-tube A contains a green water plant Test-tube B contains both a green water plant and a snail. Both test tubes are kept in

sunlight Answer the questions that follow





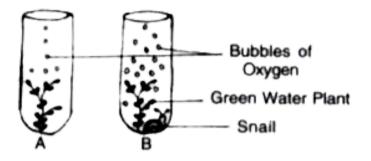
mentioned above



**33.** The diagram below shows two test-tubes A and B. Test-tube A contains a green water plant Test-tube B contains both a green water

plant and a snail. Both test tubes are kept in

sunlight Answer the questions that follow



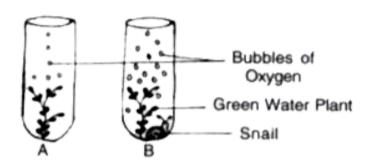
What is the purpose of keeping a snail in test-

tube "B?

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**34.** The diagram below shows two test-tubes A and B. Test-tube A contains a green water

plant Test-tube B contains both a green water plant and a snail. Both test tubes are kept in sunlight Answer the questions that follow

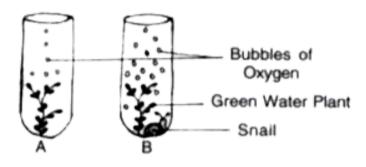


Write the overall chemical reaction for the

above process.



**35.** The diagram below shows two test-tubes A and B. Test-tube A contains a green water plant Test-tube B contains both a green water plant and a snail. Both test tubes are kept in sunlight Answer the questions that follow



Write the overall chemical reaction for the

above process.

**36.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions : The layer which prevents reflection of light.

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**37.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions : The structure that alters the focal length of

the lens.



**38.** Draw a diagram of the human eye as seen

in a vertical section and label the parts which

suits the following functions/descriptions :

The region of distinct vision.

**39.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions : The part which transmits the impulse to the brain.

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**40.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions : The outermost transparent layer in front of

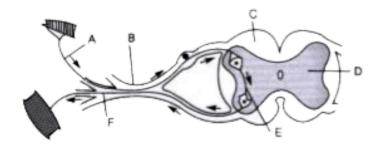
the eye lens.



**41.** Draw a diagram of the human eye as seen in a vertical section and label the parts which suits the following functions/descriptions : The fluid present in the anterior part of the eye in front of the eye lens.

0

**42.** The diagram given below is a representation of a phenomenon pertaining to the nervous system. Study the diagram and answer the following questions:



(i) Name the phenomenon that is being depicted.

(ii) Give the technical term for the point of contact between the two nerve cells.(iii) Name the parts A, B, C and D.

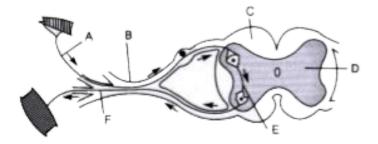
(iv) Write the functions of parts E and F.

(v) How does the arrangement of neurons in

the spinal cord differ from that of the brain.

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**43.** The diagram given below is a representation of a phenomenon pertaining to the nervous system. Study the diagram and answer the following questions:



(i) Name the phenomenon that is being depicted.

(ii) Give the technical term for the point of contact between the two nerve cells.

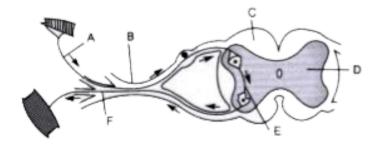
(iii) Name the parts A, B, C and D.

(iv) Write the functions of parts E and F.

(v) How does the arrangement of neurons in

the spinal cord differ from that of the brain.

**44.** The diagram given below is a representation of a phenomenon pertaining to the nervous system. Study the diagram and answer the following questions:



(i) Name the phenomenon that is being depicted.

(ii) Give the technical term for the point of contact between the two nerve cells.

(iii) Name the parts A, B, C and D.

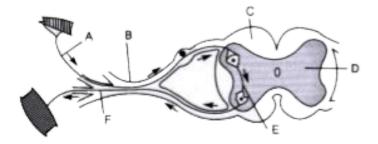
(iv) Write the functions of parts E and F.

(v) How does the arrangement of neurons in

the spinal cord differ from that of the brain.

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**45.** The diagram given below is a representation of a phenomenon pertaining to the nervous system. Study the diagram and answer the following questions:



(i) Name the phenomenon that is being depicted.

(ii) Give the technical term for the point of contact between the two nerve cells.

(iii) Name the parts A, B, C and D.

(iv) Write the functions of parts E and F.

(v) How does the arrangement of neurons in

the spinal cord differ from that of the brain.

46. How does the arrangement of neurons in

the spinal cord differ from that of the brain?

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#### 47. Mention three adaptations found in plants

to reduce transpiration.



**48.** Give scientific reasons for the following statements:

We feel blinded for a short while entering a

dark room when coming from bright light.



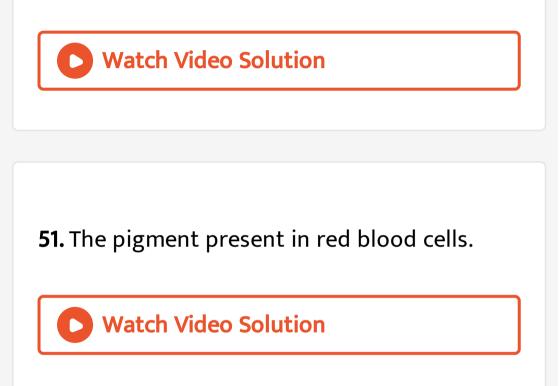
**49.** Explain how the rate of transpiration Is

affected on :

a windy day

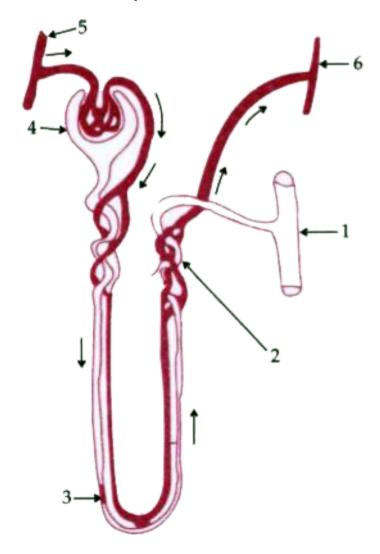


**50.** A nitrogenous base in DNA.



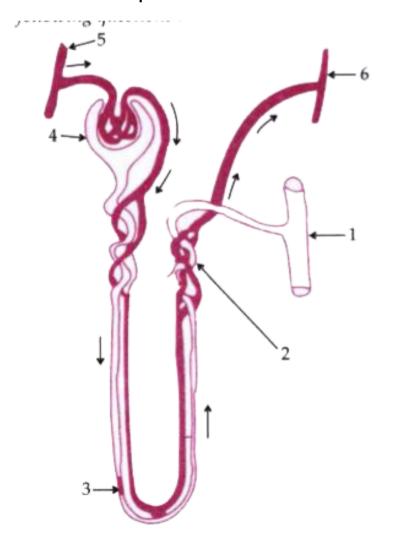
**52.** The given diagram represents a nephron and its blood supply. Study the diagram and

answer the question :



Label parts 1, 2, 3 and 4.

**53.** The given diagram represents a nephron and its blood supply. Study the diagram and answer the question :

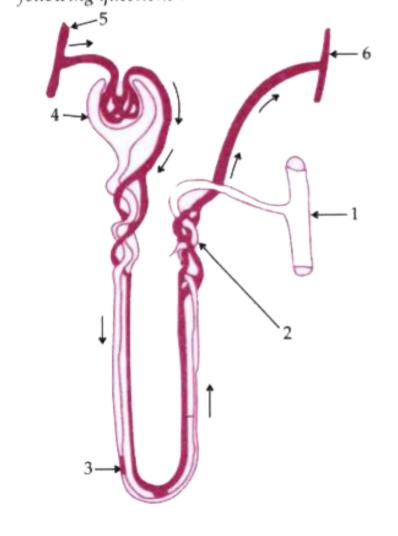


State the reason for the high hydrostatic

pressure in the glomerulus.



**54.** The given diagram represents a nephron and its blood supply. Study the diagram and answer the question :



Name the blood vessel which contains the

least amount of urea in this diagram.

**55.** The given diagram represents a nephron and its blood supply. Study the diagram and answer the following questions:



Name the two main stages of urine formation.

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**56.** The given diagram represents a nephron and its blood supply. Study the diagram and answer the following questions:



Name the part of the nephron which lies in

the renal medulla.

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**57.** Mention the effets of two individuals in a street fight on the following organs by the autonomous nervous system (one has been done for you).

Organ	Sympathetic system	Parasympathetic system
Lungs	Dilates bronchi and bronchioles	Constricts bronchi and bronchioles
(1) Heart		A Philadeline and a second sec
(2) Pupil of the eye		
(3) Salivary gland		





**58.** Give the specific function of:

(i) Centrosome

(ii) Stoma

(iii) Transpiration

(iv) Ureter

(v) Vitreous humour



**59.** Name the following :

That part of the chloroplast where the light

reaction of photosynthesis takes place.