



### **BIOLOGY**

# BOOKS - EVERGREEN BIOLOGY (ENGLISH)

## **SAMPLE PAPER 2018**



1. Differentiate between the following pairs on

the basis of what is mentioned in brackets:

The organization which procures and supplies

blood during an emergency



**2.** Name the following:

The blood vessel which supplies blood to the

liver



3. The number of chromosomes present in a

nerve cell of a human being.

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4. Name the The layer of the eyeball that

forms the transparent cornea.



**5.** Name the following:

The wax-like layer on the epidermis of leaves

which reduces transpiration.



6. Copy and complete the following by filling in the blanks 1 to 5 with appropriate words/terms/ phrases:
To test the leaf for starch, the leaf is boiled in water......(1) It is next boiled in methylated

spirit to.....(2)The leaf is placed in warm water to soften it. It is then placed in a dish and ...... (3) solution is added. The region, which contains starch, turns...(4)and the region, which does not contain starch, turns ...... (5)

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**7.** 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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**8.** The statement given below is incorrect. Rewrite the correct statement by changing the underlined words of the statement.

Normal pale yellow colour of the urine is due

to the presence of the pigment Melanin.

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**9.** The statement given below is incorrect. Rewrite the correct statement by changing the underlined words of the statement

The outermost layer of Meninges is Pia mater.



# **10.** The statement given below is incorrect. Rewrite the correct statement by changing the

underlined words of the statement.

The cell sap of root hair is Hypotonic.



11. The statement given below is incorrect.Rewrite the correct statement by changing the underlined words of the statementXylem transports starch from the leaves to all

parts of the plant body

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12. Nitrogen bonds are present between the complementary nitrogenous bases of DNA.
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13. Choose between the two options to answer the question specified in the brackets for the following:

An example is illustrated below :

Example : Corolla or Calyx (Which is the outer

whorl ?) Answer : Calyx

(i) Blood in the renal artery or renal vein

(Which one has more urea ?)

(ii) Perilymph or endolymph (Which one surrounds the organ of Corti ?) (iii) Lenticels or stomata (Which one remains open always?) (iv) Sclerotic layer or choroid layer (Which one forms the Iris?) (v) Blood in the pulmonary artery or pulmonary vein (Which one contains less oxyhaemoglobin?)

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**16.** Choose between the two options to answer the question specified in the brackets for the following:

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**Watch Video Solution** 

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(v) Blood in the pulmonary artery or

pulmonary vein (Which one contains less

oxyhaemoglobin?)



**18.** Given below is a representation of a kind of pollution. Study the same and answer the questions that follow :



- (i) Name the kind of pollution.
- (ii) List any three common sources of this pollution
- (iii) Mention three harmful effects of this pollution on human health.

(iv) Explain the term 'Pollutant'.

(v) Name two soil pollutants.



**19.** Given below is a representation of a kind of pollution. Study the same and answer the questions that follow :



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- (iii) Mention three harmful effects of this pollution on human health.

(iv) Explain the term 'Pollutant'.

(v) Name two soil pollutants.



**20.** Given below is a representation of a type of pollution. Study the picture and answer the question :



How does this pollution affect human health ?



**21.** Given below is a representation of a type of pollution. Study the picture and answer the

#### question :



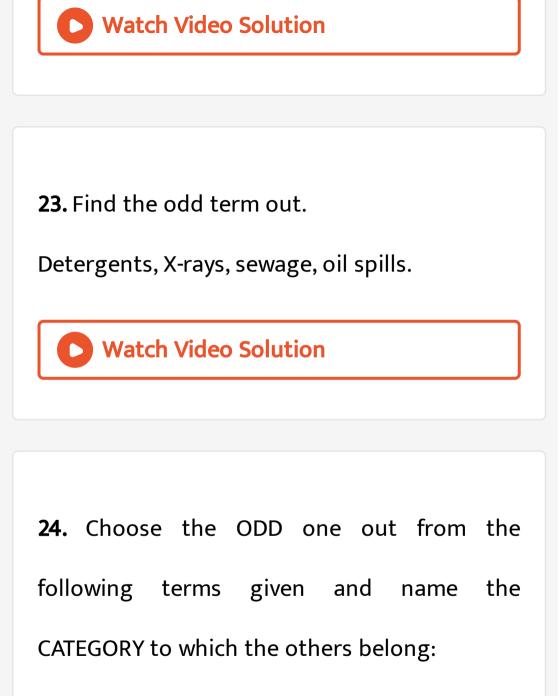
Write one measure to reduce this pollution.

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**22.** Given below is a representation of a type of pollution. Study the picture and answer the question :



State one gaseous compound that leads to the depletion of the ozone layer and creates 'Ozone holes'.



Example : Nose, Tongue, Arm, Eye. Answer :

Odd Term - Arm, Category - Sense organs

Lumen, muscular tissue, connective tissue, pericardium.

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**25.** Choose the odd one out of the following set of terms given and name the category to which the others belong:

(i) Phosphate, RNA, Sugar, Nitrogenous base.

(ii) Urethra, uterus, urinary bladder, ureter.

(iii) Cyton, Photon, Axon, Dendron.

(iv) Haemoglobin, glucagon, iodopsin,

rhodopsin.

(v) Dendrites, Medullary Sheath, Axon, Spinal

cord.

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26. Choose the ODD one out from the following terms given and name the CATEGORY to which the others belong:
Example : Nose, Tongue, Arm, Eye. Answer : Odd Term - Arm, Category - Sense organs

Centrosome, Cell wall, Cell membrane, Large

vacuoles.



**27.** Find the odd one out and name the category :

Prostate gland, Cowper's gland, seminal

vesicle, seminiferous tubules.

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

The number of Spinal nerves in a human being are :

A. 31 pairs

B. 10 pairs

C. 21 pairs

D. 30 pairs





- 2. Name the following:
- A non-biodegradable pesticide.
  - A. DDT
  - B. Vegetable peel
  - C. Cardboard
  - D. Bark of trees





### 3. Aqueous humour is present between the :

- A. Lens and Retina
- B. Iris and Lens
- C. Cornea and Iris
- D. Cornea and Lens

Answer: D



**4.** A strong chemical substance which is used on objects and surfaces in our surroundings to kill germs:

A. Cresol

B. Carbolic acid

C. lodine

D. Mercurochrome





5. Choose the correct option from the four given below:
Which one of the following is a Greenhouse gas ?

A. Oxygen

B. Methane

C. Sulphur dioxide

D. Nitrogen



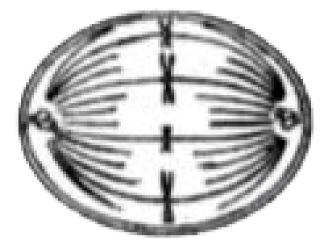


1. The diagram given below represents a stage

during cell division

Study the same and answer the questions that

follow :



Identify whether it is a plant cell or an animal

cell I Give a reason in support of your answer.

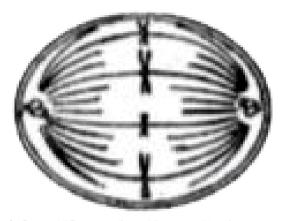


2. The diagram given below represents a stage

during cell division

### Study the same and answer the questions that

follow :



Name the stage depicted in the diagram. What

is the unique feature observed in this stage?

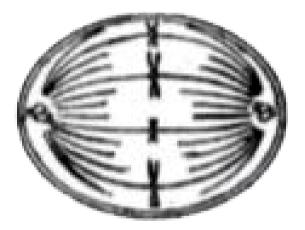


3. The diagram given below represents a stage

#### during cell division

Study the same and answer the questions that

follow :



Name the type of cell division that occurs during:

Replacement of old leaves by new ones.

Formation of gametes

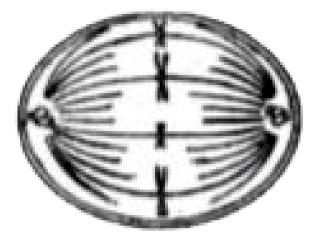


4. The diagram given below represents a stage

during cell division

Study the same and answer the questions that

follow :



What is the stage that comes before the stage

shown in the diagram ?

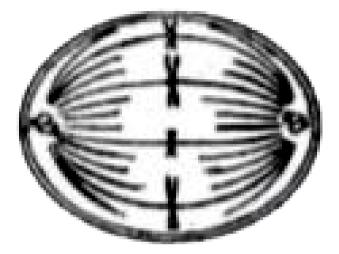
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5. The diagram given below represents a stage

during cell division

Study the same and answer the questions that

#### follow :



Draw a neat, labelled diagram of the stage mentioned in.



6. Give the exact location and one function of

the following:

Epididymis



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

(i) Proximal convoluted tubule.

(ii) Lacrimal gland

(iii) Malleus

(iv) Hydathodes

(v) Semilunar valve



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

(i) Proximal convoluted tubule.

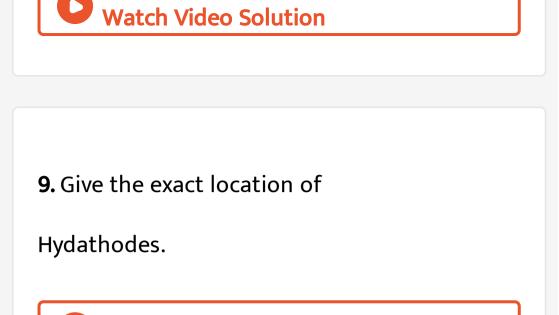
(ii) Lacrimal gland

(iii) Malleus

(iv) Hydathodes

(v) Semilunar valve





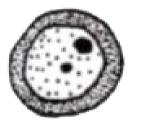
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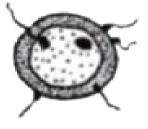
10. State the exact location of the following

Pulmonary semilunar valve

**11.** Given below are diagrams showing the different stages in the process of fertilisation of an egg in the human female reproductive tract.

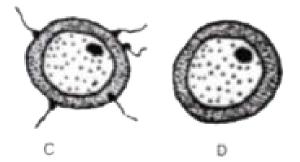
Study the diagrams and answer the questions





A

B



(i) Arrange the letters given below each

diagram in a logical sequence to show the correct order in the process of fertilisation. (ii) Where does fertilisation normally take place? What is 'Implantation' that follows fertilisation? (iii) Mention the chromosome number of the egg and zygote in humans.

(iv) Explain the term 'Gestation'. How long

does Gestation last in humans?

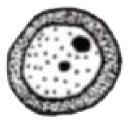
(v) Draw a neat, labelled diagram of a mature

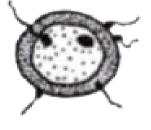
human sperm.



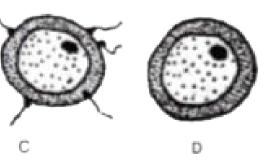
**12.** Given below are diagrams showing the different stages in the process of fertilisation of an egg in the human female reproductive tract.

Study the diagrams and answer the questions





A



(i) Arrange the letters given below each

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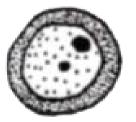
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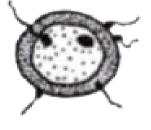
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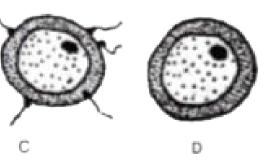
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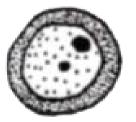
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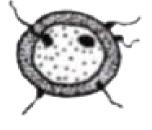
human sperm.



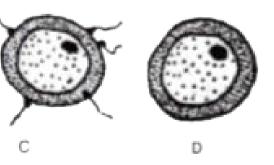
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Study the diagrams and answer the questions





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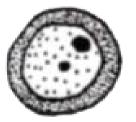
(v) Draw a neat, labelled diagram of a mature

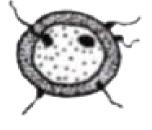
human sperm.



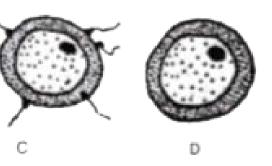
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Study the diagrams and answer the questions





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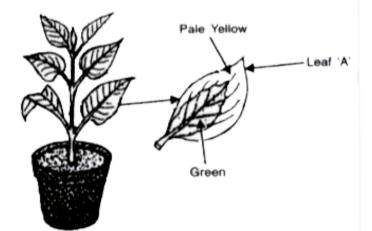
does Gestation last in humans?

(v) Draw a neat, labelled diagram of a mature

human sperm.



**16.** 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.

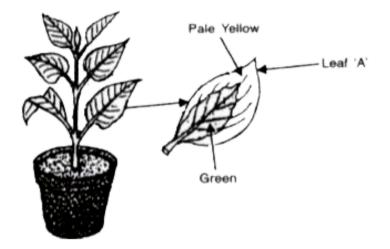


What aspect of photosynthesis is being tested

in the above diagram?



**17.** 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.



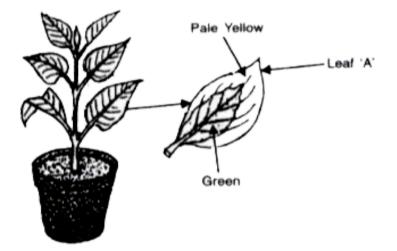
Represent the process of photosynthesis in

the form of a balanced equation

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**18.** 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?

**19.** The diagram given below is an experiment conducted to study a factor necessary for photosynthesis Observe the diagram and then

answer the following questions

BEFORE THE EXPERIMENT

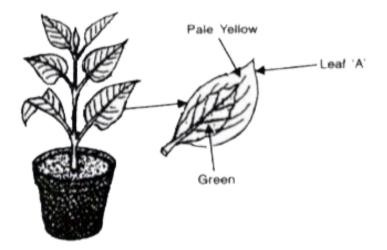


ER THE EXPERIMENT

Name the test performed on the leaf and the

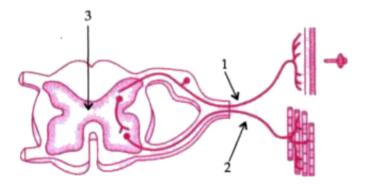
solution used for the test

**20.** 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

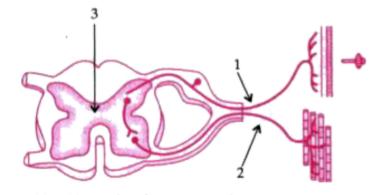
**21.** The diagram given below shows the internal structure of a spinal cord depicting a phenomenon. Study the diagram and answer the questions:



Name the phenomenon that is depicted in the

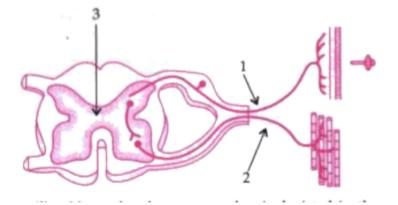
diagram. Define the phenomenon.

**22.** The diagram given below shows the internal structure of a spinal cord depicting a phenomenon. Study the diagram and answer the questions:



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

**23.** The diagram given below shows the internal structure of a spinal cord depicting a phenomenon. Study the diagram and answer the questions:



Name the phenomenon that is depicted in the

diagram. Define the phenomenon.

24. How does the arrangement of neurons in

the spinal cord differ from that of the brain?



### 25. Mention two ways by which the spinal cord

is protected in our body.



26. Give appropriate biological or technical

terms for the following:

Process of maintaining water and salt balance

in the blood.

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**27.** Give technicallbiological term for the following:

(ii) Hormones which regulate the secretion of

other endocrine glands.





28. Give appropriate biological / technical

terms for the following:

The ripened ovule.

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**29.** Give biological/ technical terms for the following:

The condition in which a pair of chromosomes carry similar alleles of a particular character.



## 30. Give appropriate biological or technical

terms for the following:

The complex consisting of a DNA strand and a

core of histones.

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**31.** Give the biological/technical terms for the

following:

The onset of menstruation in a young girl.



**32.** Give biological technical terms for the following

Squeezing out of white blood cells from the

capillaries into the surrounding tissues,

33. Give appropriate biological or technical

terms for the following:

The fluid which surrounds the foetus.



# 34. Give appropriate biological or technical

terms for the following:

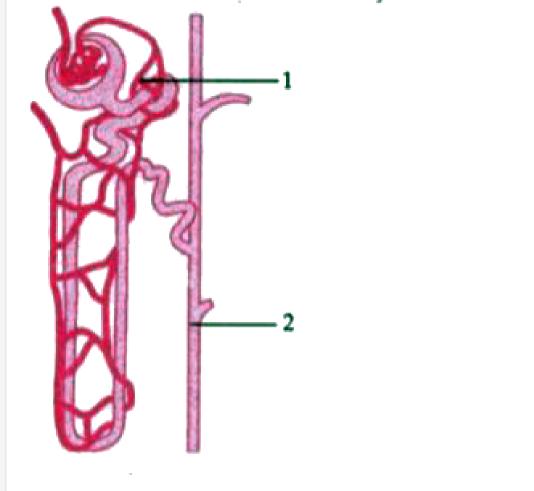
The relaxation phase of the heart.

**35.** Give biological term for the following

The difference between the birth rate and the death rate.



**36.** The diagram given below is that of a structure present in a human kidney. Study the same and answer the questions that follow:

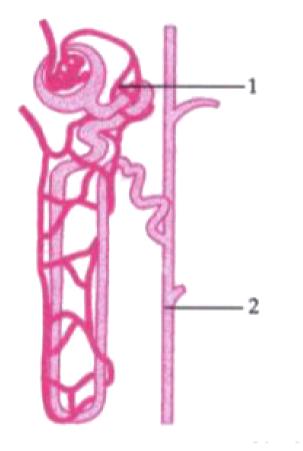


Name the structure represented in the

diagram.



**37.** The diagram given below is that of a structure present in a human kidney. Study the same and answer the questions that follow:



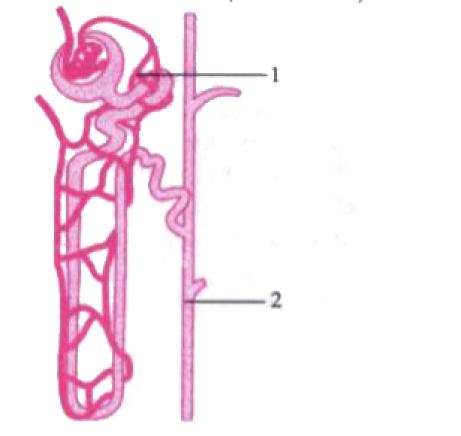
What is the liquid entering part '1' called ?

Name two substances present in this liquid

that are reabsorbed in the tubule.



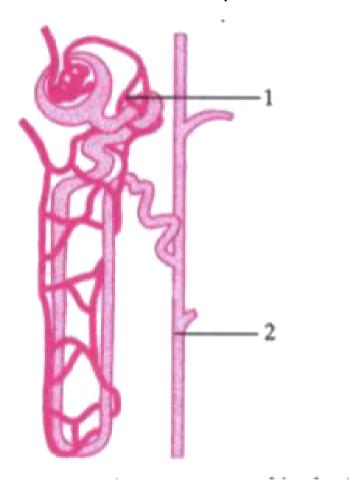
**38.** The diagram given below is that of a structure present in a human kidney. Study the same and answer the questions that follow:



What is the fluid that comes to part '2' called ?

Name the main nitrogenous waste in it.

**39.** The diagram given below is that of a structure present in a human kidney. Study the same and answer the questions that follow:

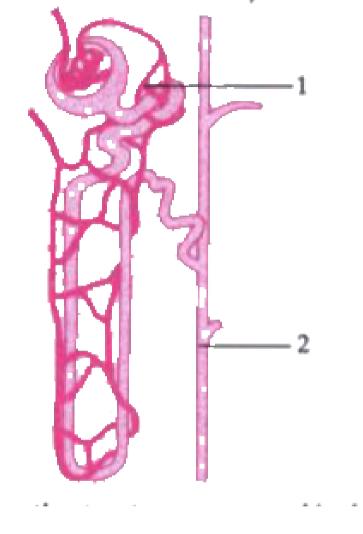


Mention the three main steps involved in the

formation of the fluid



**40.** The diagram given below is that of a structure present in a human kidney. Study the same and answer the questions that follow:



Name the substance which may be present in the fluid in part 2' if a person suffers from Diabetes mellitus.

**41.** Differentiate between the following pair on

the basis of what is mentioned within bracket

leaf and liver (from In which glucose is stored)

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42. Differentiate between the following pair on

the basis of what is mentioned within bracket

ATP and AIDS ( expand the abbrevaitions)

**43.** Differentiate between :

Testosterone and Oestrogen (organ which

secretes]

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**44.** Differentiate between the following pair on the basis of what is mentioned within brackets:

Ureter and Urethra [function]

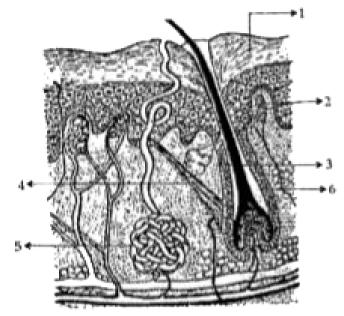


**45.** Differentiate between the following pairs on the basis of what is mentioned in brackets: Hypotonic solution and Hypertonic solution [condition of a plant cell when placed in them]



**46.** Study the diagram and answer the questions that follow :

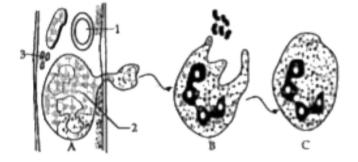




## Label the parts 1 - 4.



**47.** Study the diagrams given below and answer the questions tht follow:

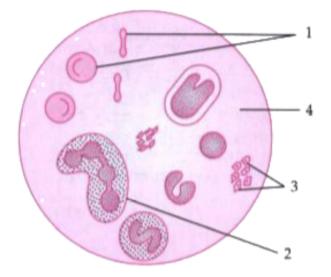


Mention two structural differences between 1

and 2

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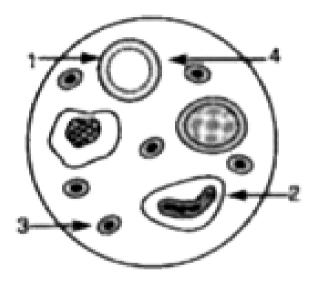
**48.** Given below is a diagram of a human blood smear. Study the diagram and answer the questions that follow:



Name the soluble protein found in part 4 which forms insoluble threads during clotting of blood



**49.** Given below is a diagram of a human blood smear. Study the diagram and answer the questons that follow:

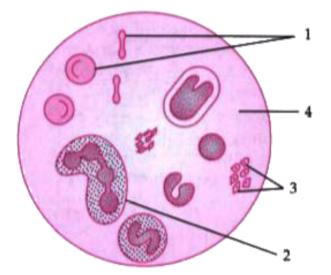


Smear of human blood

Whatis the average lifespan of the component

numbered '1' ?

**50.** Given below is a diagram of a human blood smear. Study the diagram and answer the questions that follow:



Component numbered '1' do not have certain organelles but are very efficient in their function Explain.



statement

Education is very important for population control.

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**52.** Comment upon the following:

The placenta is an important structure for the

development of a foetus.

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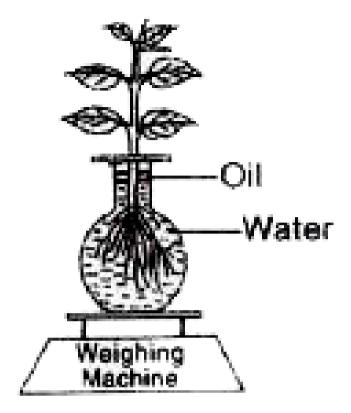
53. Give biological reason for the following statements :Plants growing in fertilized soil are often found to wilt if the soil is not adequately watered.

**54.** Give biological reason for the following:

We should not put sharp objects into our ears.

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**55.** The diagram below represents a process in plants. The setup was placed in bright sunlight. Answer the following questions :

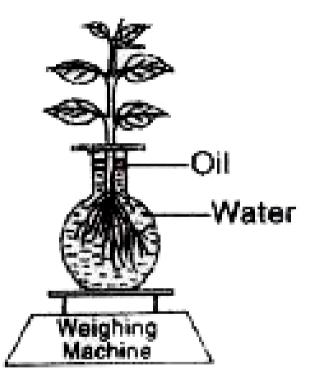


Name the physiological process depicted in

the diagram .

Why was oil added to the water?



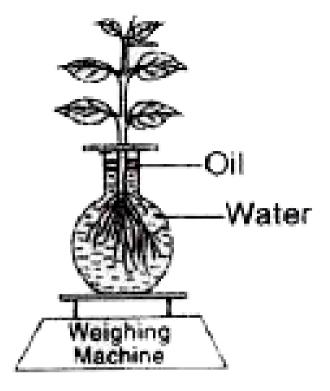


When placed in bright sunlight for four hours, what do you observe with regard to the initial and final weight of the plant?

Give a suitable reason for your answer.



**57.** The diagram below represents a process in plants. The setup was placed in bright sunlight. Answer the following questions :

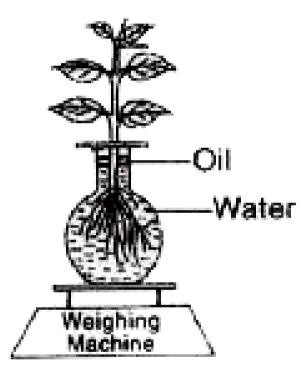


What happens to the level of water when this

setup is placed in:

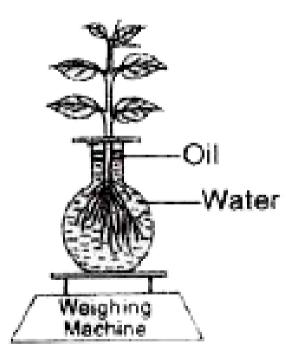
1. Humid conditions? 2. Windy conditions?





Mention any three adaptations found in

plants to overcome this process?



Explain the term 'Guttation'



**60.** 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?



**61.** 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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62. Give biological reason for the following

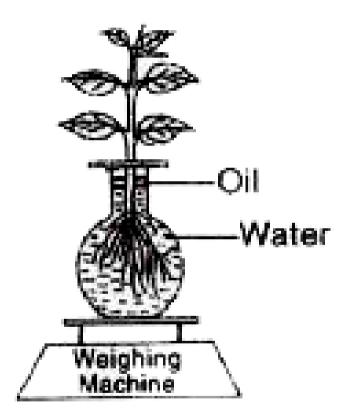
statements :

Plants growing in fertilized soil are often found to wilt if the soil is not adequately watered.

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**63.** Give biological reason for the following:

We should not put sharp objects into our ears.



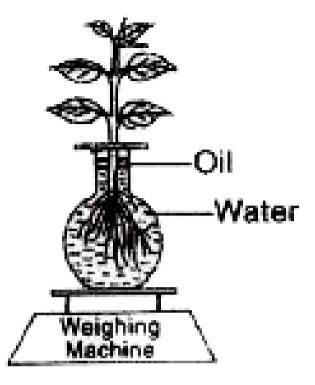
Name the physiological process depicted in

the diagram .

Why was oil added to the water?



**65.** The diagram below represents a process in plants. The setup was placed in bright sunlight. Answer the following questions :

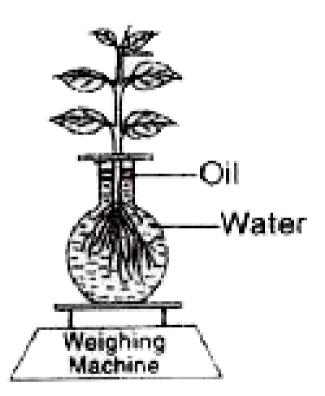


When placed in bright sunlight for four hours,

what do you observe with regard to the initial

and final weight of the plant?

Give a suitable reason for your answer.



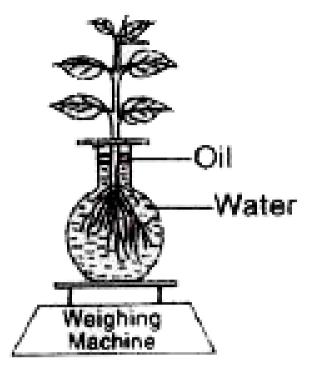
What happens to the level of water when this

setup is placed in:

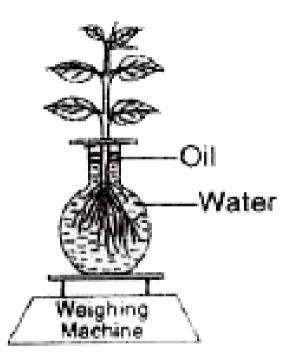
1. Humid conditions? 2. Windy conditions?



**67.** The diagram below represents a process in plants. The setup was placed in bright sunlight. Answer the following questions :



Mention any three adaptations found in plants to overcome this process?



Explain the term 'Guttation'

**69.** 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?



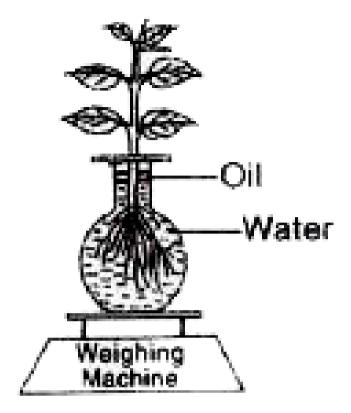
**70.** A pea plant which is homozygous for Green pods which are inflated [GGII) is crossed with a homozygous plant for yellow pods which are constricted (ggii). Answer the following questions: Write the phenotypic ratio of the F generation.

**71.** Give biological reason for the following:

We should not put sharp objects into our ears.

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**72.** The diagram below represents a process in plants. The setup was placed in bright sunlight. Answer the following questions :

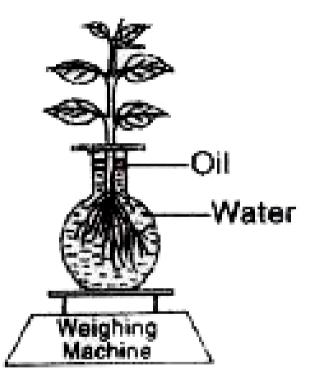


Name the physiological process depicted in

the diagram .

Why was oil added to the water?



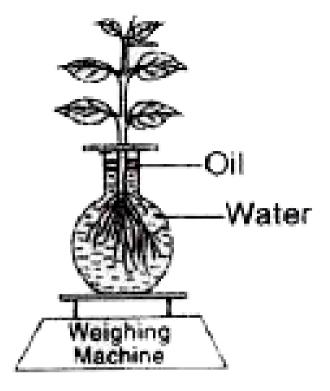


When placed in bright sunlight for four hours, what do you observe with regard to the initial and final weight of the plant?

Give a suitable reason for your answer.



**74.** The diagram below represents a process in plants. The setup was placed in bright sunlight. Answer the following questions :

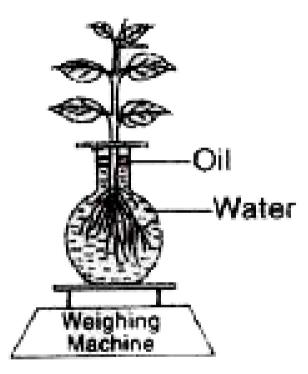


What happens to the level of water when this

setup is placed in:

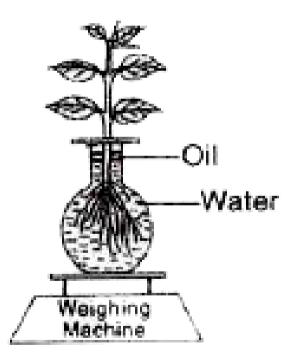
1. Humid conditions? 2. Windy conditions?





Mention any three adaptations found in

plants to overcome this process?



Explain the term 'Guttation'



**77.** 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?



**78.** 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.