



BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE PAPER 2014

Section I

1. Name the following: Part of brain associated with memory.



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2. Name the The ear ossicle which is attached to the tympanum.



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



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4. Name the hormone responsible for the following functions

Name the hormone secreted by islet of Langerhans.



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5. Name the following :

The process of conversion of ADP into ATP during photosynthesis.



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6. State the main function : Cerebrospinal fluid.



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7. Define Eustachian tube.



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8. State the main function Suspensory ligament of the eye.



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9. What are the functions of the following:

Sperm duct



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10. Main function of lenticel is



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11. Copy and complete the following by filling in the blanks 1 to 5 with appropriate words:

The human female gonads are ovaries. A maturing egg in the ovary is present in a sac of cells called _____(1). As the egg grows larger, the follicle enlarges and gets filled with a fluid and is now called the _____(2) follicle. The process of releasing the egg from the ovary is called _____(3). The ovum is picked up by the oviducal funnel and fertilisation takes place in the _____(4). In about a week, the blastocyst gets fixed in the

endometrium of the uterus and this process is called _____ (5).



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12. Given below are six sets with four terms each. In each set one term is odd 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 one has been done as an example.

Example: Calyx, Corolla, Stamens, Midrib

Odd term : Midrib

Category : Parts of a flower.

Haemoglobin, Glucagon, Iodopsin, Rhodopsin.



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13. Choose the ODD one out of the following terms given and name the CATEGORY to which the others belong :

Urethra, uterus, urinary bladder, ureter.



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14. Given below are six sets with four terms each. In each set one term is odd 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 one has been done as an example.

Example: Calyx, Corolla, Stamens, Midrib

Odd term : Midrib

Category : Parts of a flower.

Transpiration, Photosynthesis, Phagocytosis,
Guttation.



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15. Identify the ODD term in each set and name the CATEGORY to which the remaining three belong:

Example: glucose, starch, cellulose, calcium

Odd term: calcium

Category: others are different types of

carbohydrates

Axon, Dendron, Photon, Cyton



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16. Given below are six sets with four terms each. In each set one term is odd 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 one has been done as an example.

Example: Calyx, Corolla, Stamens, Midrib

Odd term : Midrib

Category : Parts of a flower.

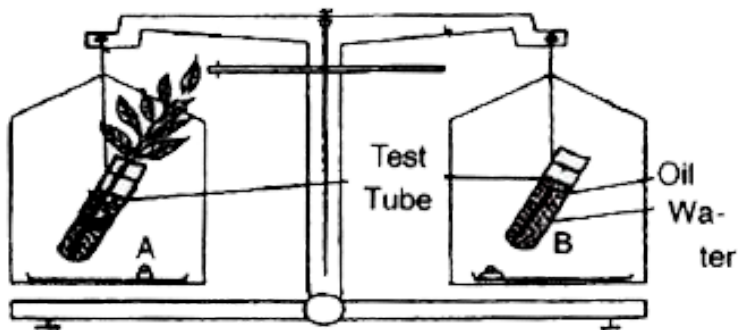
Oxytocin, Insulin, Prolactin, Progesterone.



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17. The figure given below represents an experimental setup with a weighing machine to demonstrate a particular process in plants. The experimental set -up was placed in bright sunlight. Study the diagram and answer the

following questions :

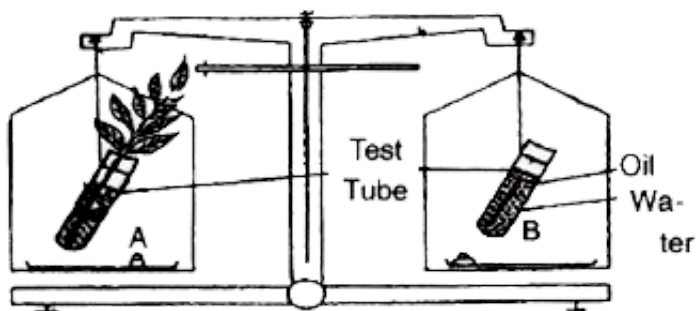


Name the process intended for study.

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18. The figure given below represents an experimental setup with a weighing machine to demonstrate a particular process in plants. The experimental set -up was placed in bright

sunlight. Study the diagram and answer the following questions :

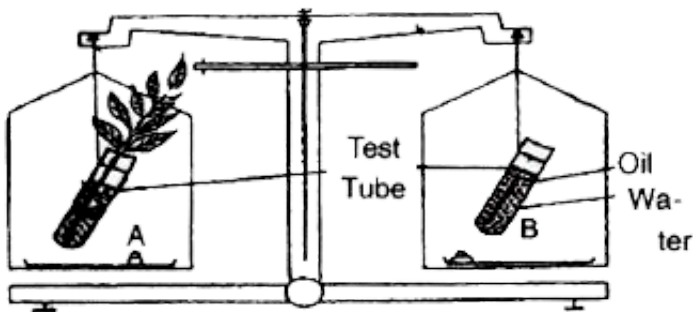


When the weight of the test tube (A & B) is taken before and after the experiment, what is observed? Give reasons to justify your observation in A & B.



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19. The figure given below represents an experimental setup with a weighing machine to demonstrate a particular process in plants. The experimental set-up was placed in bright sunlight. Study the diagram and answer the following questions :



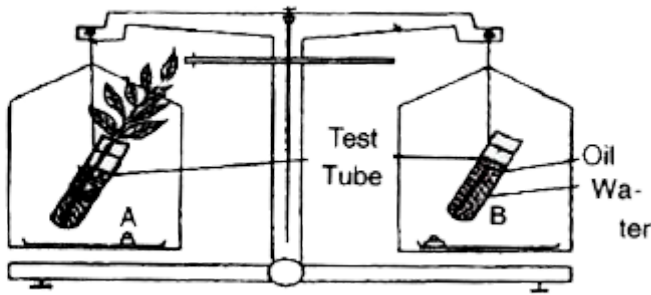
When the weight of the test tube (A & B) is taken before and after the experiment, what is

observed? Give reasons to justify your observation in A & B.



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20. The figure given below represents an experimental setup with a weighing machine to demonstrate a particular process in plants. The experimental set -up was placed in bright sunlight. Study the diagram and answer the following questions :



What is the purpose of keeping the test tube
Bin the experimental set-up?



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

Column A and Column B:

S. No.	Column A	Column B
1.	<i>Pituitary gland</i>	<i>(a) Testosterone</i>
2.	<i>Sulphur dioxide</i>	<i>(b) Calcium</i>
3.	<i>Seminiferous tubules</i>	<i>(c) Growth hormone</i>
4.	<i>Clotting of blood</i>	<i>(d) Acid rain</i>
5.	<i>Guttation</i>	<i>(e) Sperms</i>
		<i>(f) Global warming</i>
		<i>(g) Magnesium</i>
		<i>(h) Hydathodes</i>



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22. State the exact location of the following

Tricuspid valve.





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23. Give the exact location of each of the following structures:

Amnion



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24. Mention the exact location of the following structures : Yellow spot.



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25. The common duct formed by the union of vas deferens and duct from seminal vesicle is



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26. Give the exact location of the following :

Adrenal gland



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Section I Choose The Correct Answer

1. Cretinism and myxoedema are due to :

A. Hypersecretion of thyroxin

B. Hypersecretion of growth hormone

C. Hyposecretion of thyroxin.

D. Hyposecretion of growth hormone.

Answer: C



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2. Which of the following is not a reflex action ?

A. Knee-jerk.

B. Blinking of eyes due to strong light.

C. Salivation at the sight of food.

D. Sneezing when any irritant enters the nose.

Answer: C



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

A. 44 + xx chromosome.

B. 44 + xy chromosome.

C. 22 + x chromosome.

D. 22 + y chromosome.

Answer: A



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4. Penicillin is obtained from

A. Protozoan

B. Bacteria

C. Virus

D. Fungus

Answer:



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5. Select and rewrite the correct answer to the given statements from the four choices given below each statement.

Site of maturation of human sperm is the :

1)Seminiferous tubules

2)Interstitial cells

3)Epididymis

4)Prostate gland

A. Seminiferous tubule

B. Interstitial cells

C. Epididymys

D. Prostate gland

Answer: C



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Section II

1. Spinal and Cranial nerves



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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. Differentiate between :

Corpus callosum and Corpus luteum

(Function)



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4. 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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5. Differentiate between the following pairs on the basis of what is mentioned within brackets :

Disinfectant and Antiseptic (Definition).



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6. The diagram given below represents the simplified pathway of the circulation of blood. Study the same and answer the questions that follow :

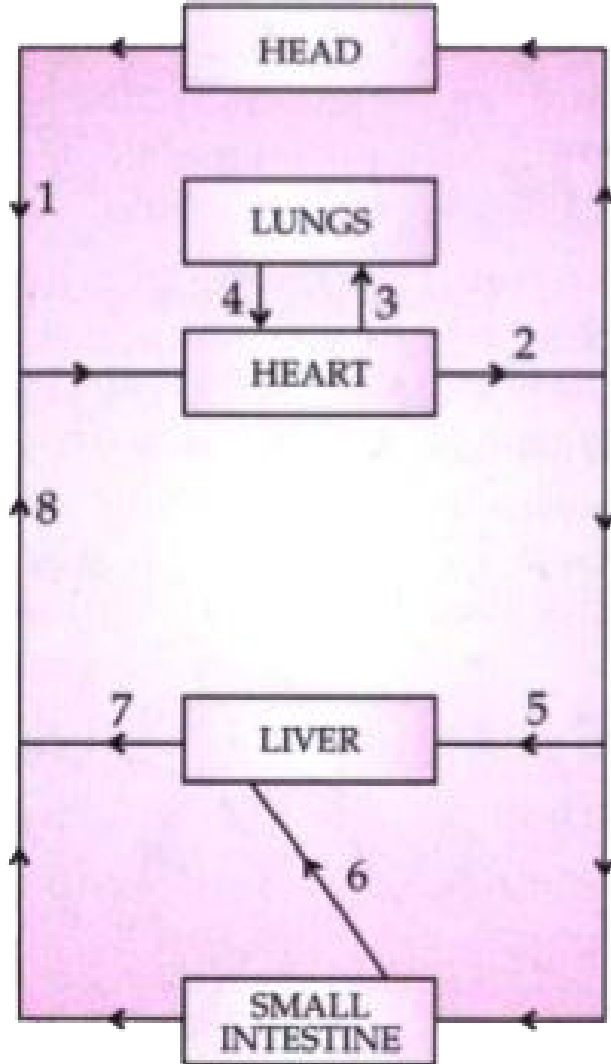


Name the blood vessels labelled 1 and 2



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7. The diagram below represents the simplified pathway of the circulation of blood. Study the same and answer the questions that follow :



Name the blood vessels labelled 1 and 2.



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8. The diagram given below represents the simplified pathway of the circulation of blood. Study the same and answer the questions that follow :



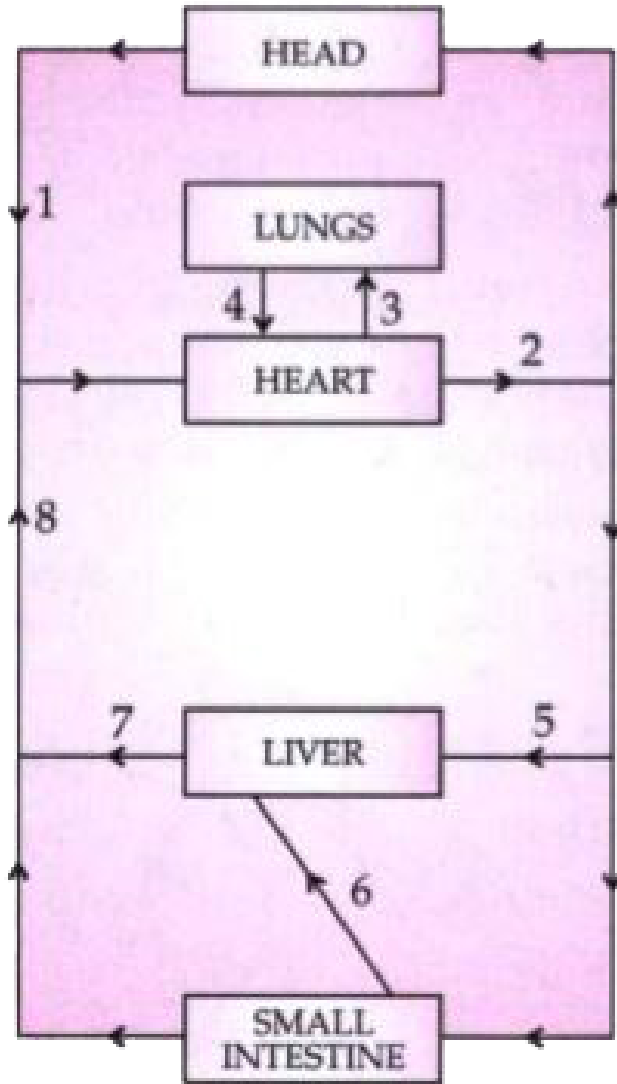
What is the importance of the blood vessel labelled 6?



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9. The diagram below represents the simplified pathway of the circulation of blood. Study the

same and answer the questions that follow :

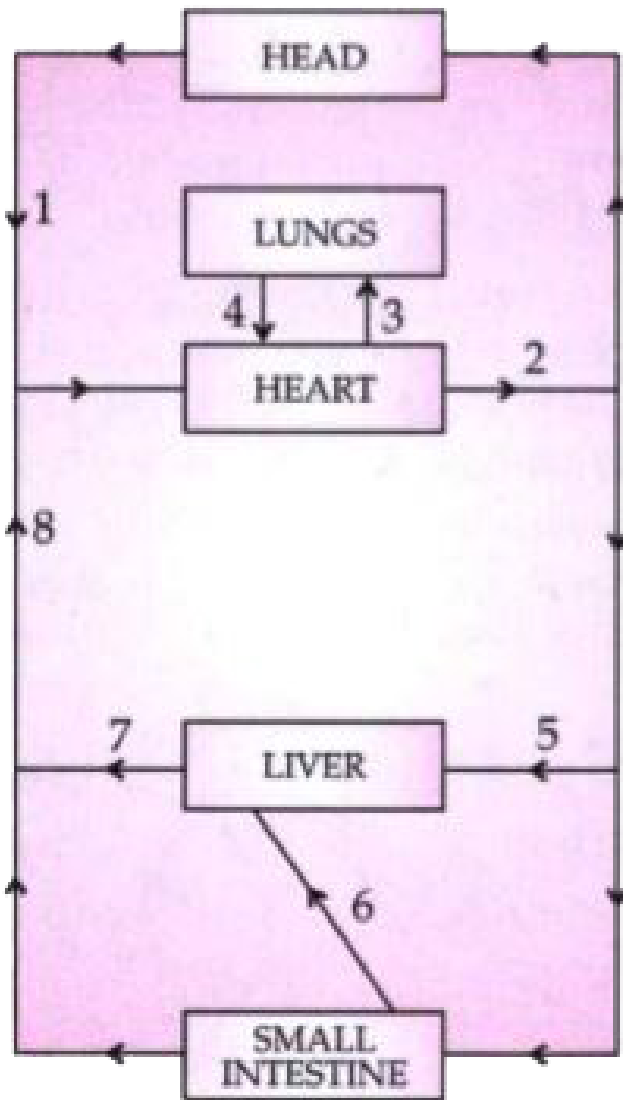


Which blood vessel will contain a high amount of glucose and amino acids after a meal ?



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10. The diagram below represents the simplified pathway of the circulation of blood. Study the same and answer the questions that follow :

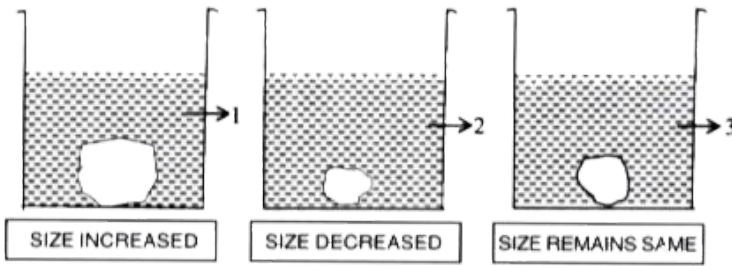


Draw a diagram of the different blood cells as seen in a smear of human blood.



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11. 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 :



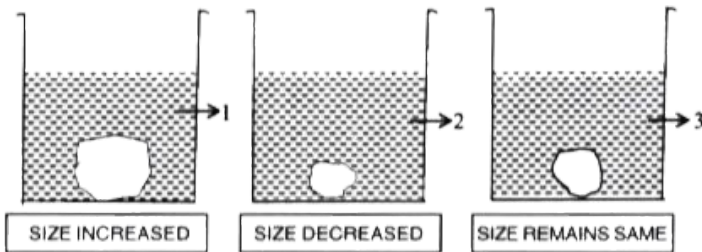
Give the technical terms of the solutions used in beakers, 1 , 2 and 3 .



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12. 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 :

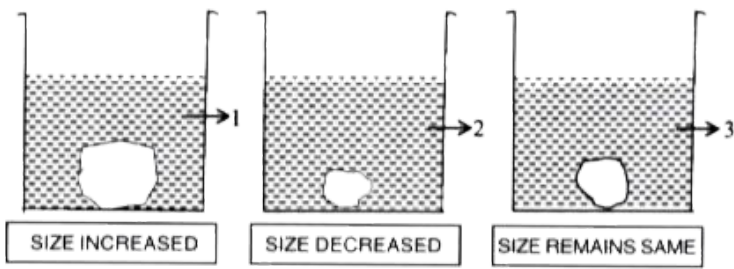


In beaker 3, the size of the potato cube remains the same. Explain the reason in brief.



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13. 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 :



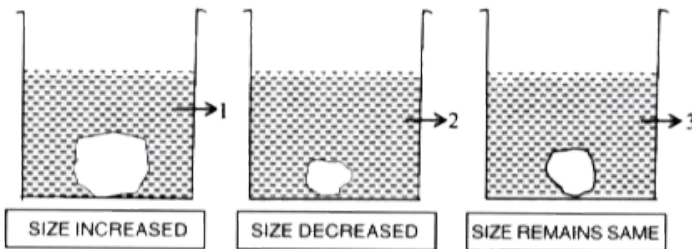
Write the specific feature of the cell sap of root hairs which helps in absorption of water.



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14. 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 :

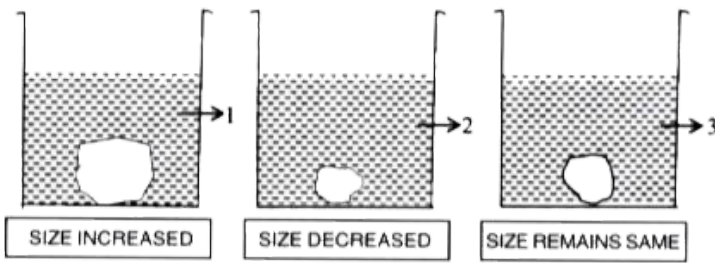


What is osmosis ?



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15. 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 :



How does a cell wall and a cell membrane differ in their permeability?



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16. A candidate in order to study the importance of certain factors in photosynthesis took a potted plant and kept it in the dark for over 24 hours. Then in the early

hours of the morning she covered one of the leaves with black paper in the centre only. She placed the potted plant in the sunlight for a few hours, and then tested the leaf which was covered with black paper for starch.

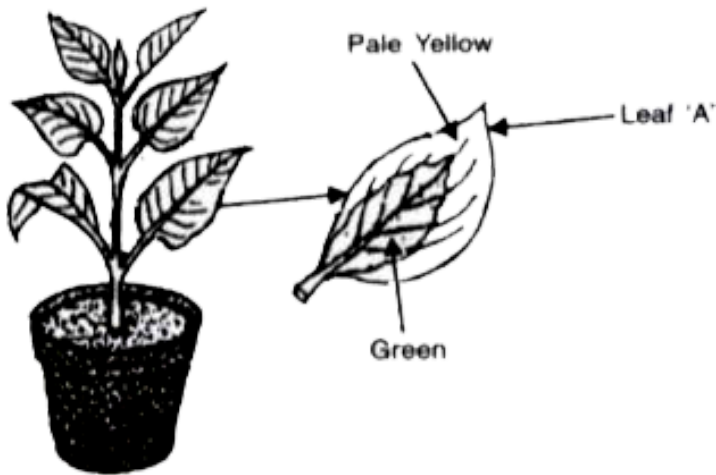
What aspect of photosynthesis was being investigated ?



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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.



Why was the plant kept in the dark before beginning the experiment?



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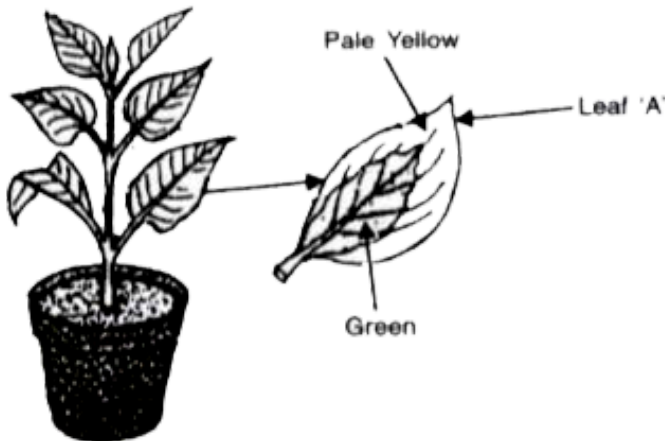
18. A healthy Croton plant bearing variegated leaves was kept in a dark cupboard to destarch it after which it was placed in sunlight for a few hours. One of the leaves was then plucked and an outline of the leaf marking the green and the non-green regions was drawn. The leaf was then tested for starch. Using the above information, answer the following questions

Why is the leaf boiled in water and alcohol before testing for the presence of starch?



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19. 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.

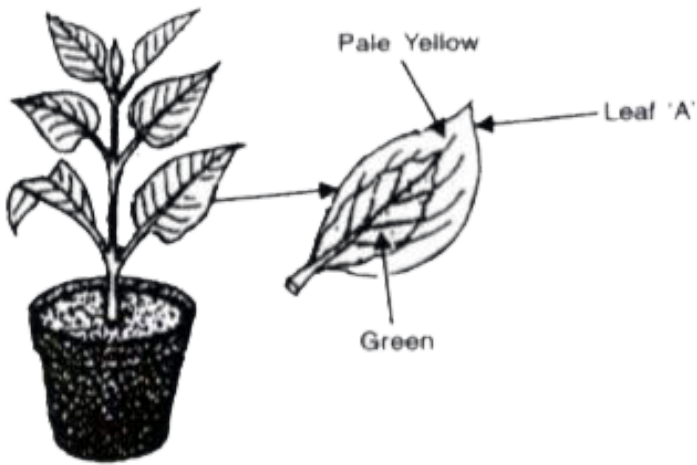


What aspect of photosynthesis is being tested in the above diagram?



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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.

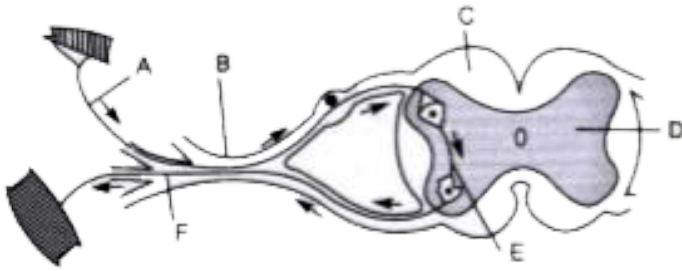


Draw a neat labelled diagram of a chloroplast



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

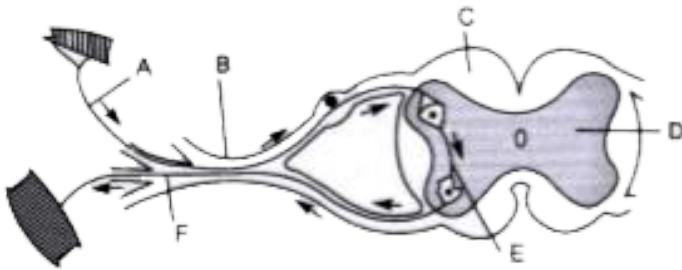


Give the technical term for the point of contact between the two nerve cells.



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



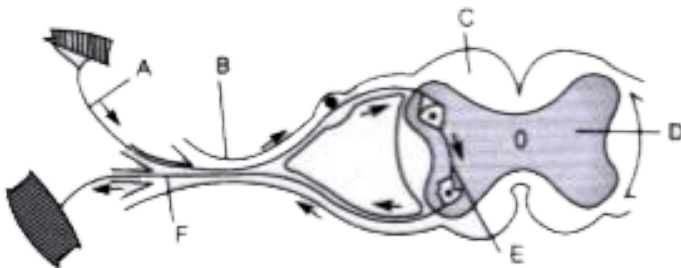
- (i) Name the phenomenon that is being depicted.
- (ii) Give the technical term for the point of contact between the two nerve cells.
- (iii) Name the parts A, B, C and D.

(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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24. 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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25. How does the arrangement of neurons in the spinal cord differ from that of the brain?



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26. Use of CFC is banned in many countries. Give scientific reasons.



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27. Give biological reason for the following:

We cannot distinguish colour in moonlight.

Give scientific reasons.



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28. Balsam plants wilt during midday even if the soil is well watered. Give scientific reason.



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29. Give biological reason for the following:

Carbon monoxide is dangerous when inhaled.



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

A person after consuming alcohol walks clumsily.



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31. 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.



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

Study it carefully and answer the questions that follow:



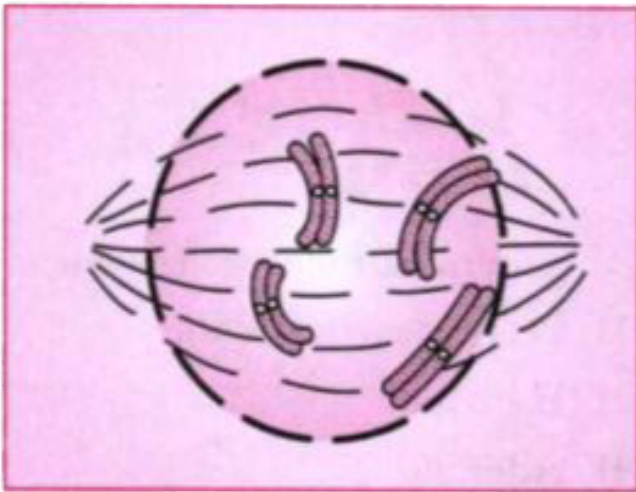
Identify the stage shown above.



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33. 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 ?



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34. 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?



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35. 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.



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36. Name the disease for which following types of vaccines are given Salk's Vaccine.



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37. Name the disease for which following types of vaccines are given B.C.G.



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38. Name the following:

One water pollutant.



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39. Give one example of aquatic plant used in the lab to demonstrate O_2 liberation during photosynthesis



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40. Define the following and give one example of Antibiotics.



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41. A nitrogenous base in DNA.



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42. Expand the following biological abbreviation ATP



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43. Expand the following biological abbreviation :

(I) ACTH and TSH

(ii) TSH



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44. Name the diseases against which DPT vaccine develops immunity.



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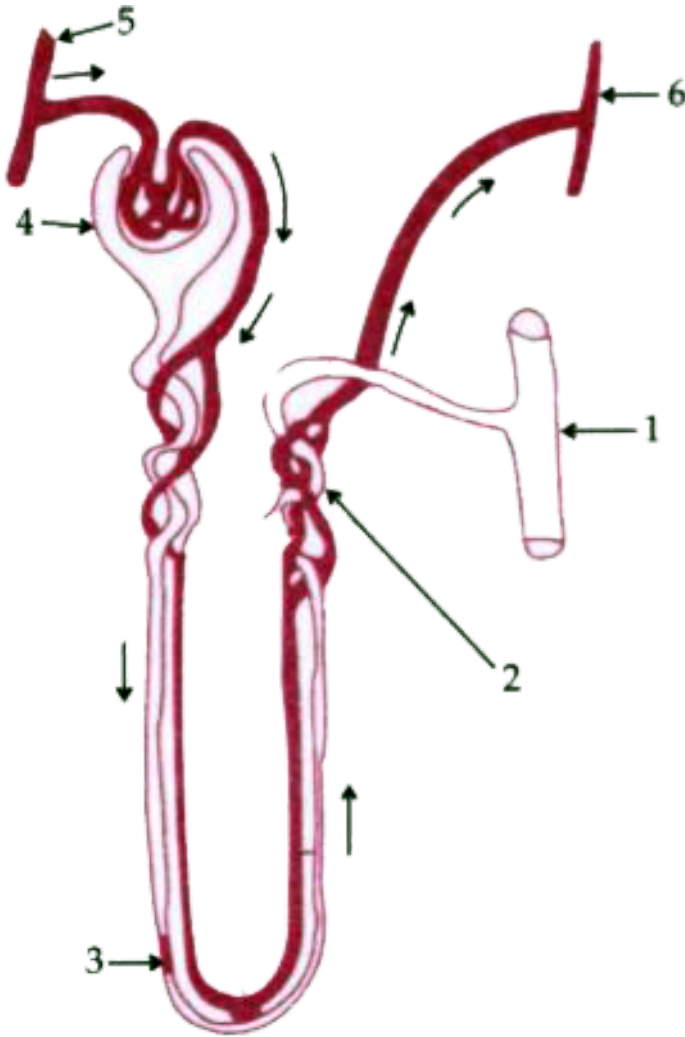
45. Expand the DNA



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

answer the question :

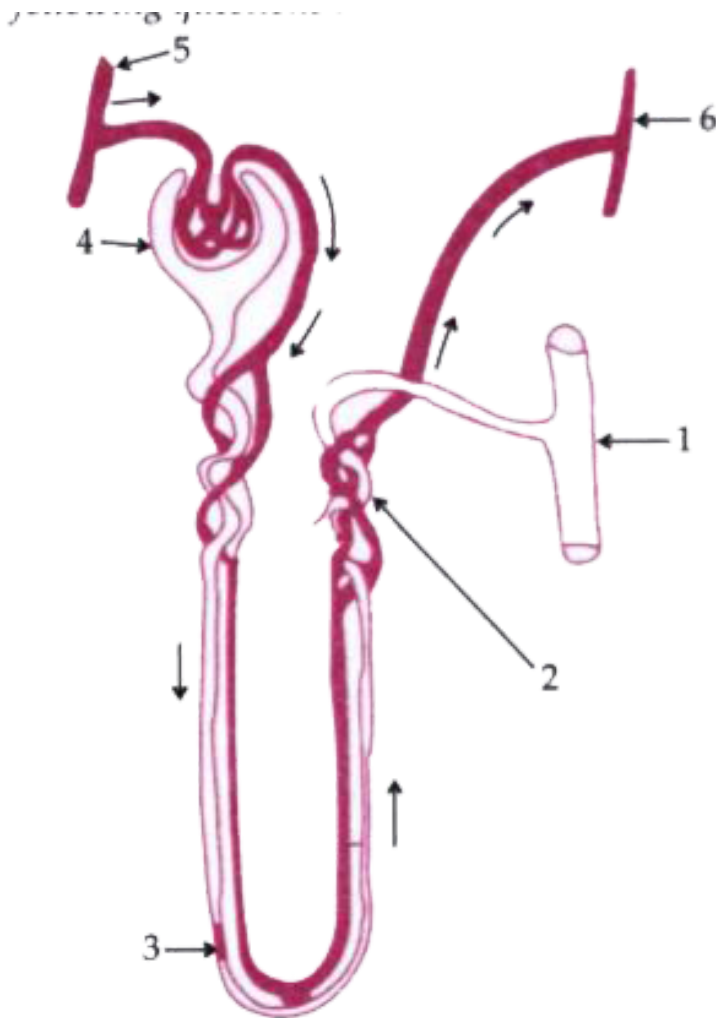


Label parts 1, 2, 3 and 4.



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

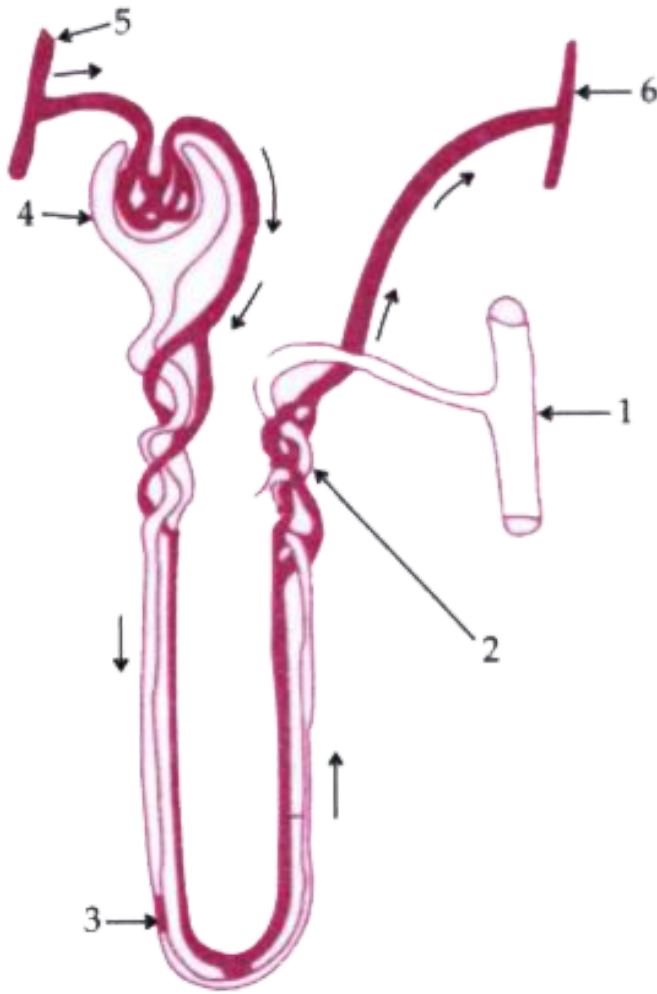


State the reason for the high hydrostatic pressure in the glomerulus.



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48. 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.



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

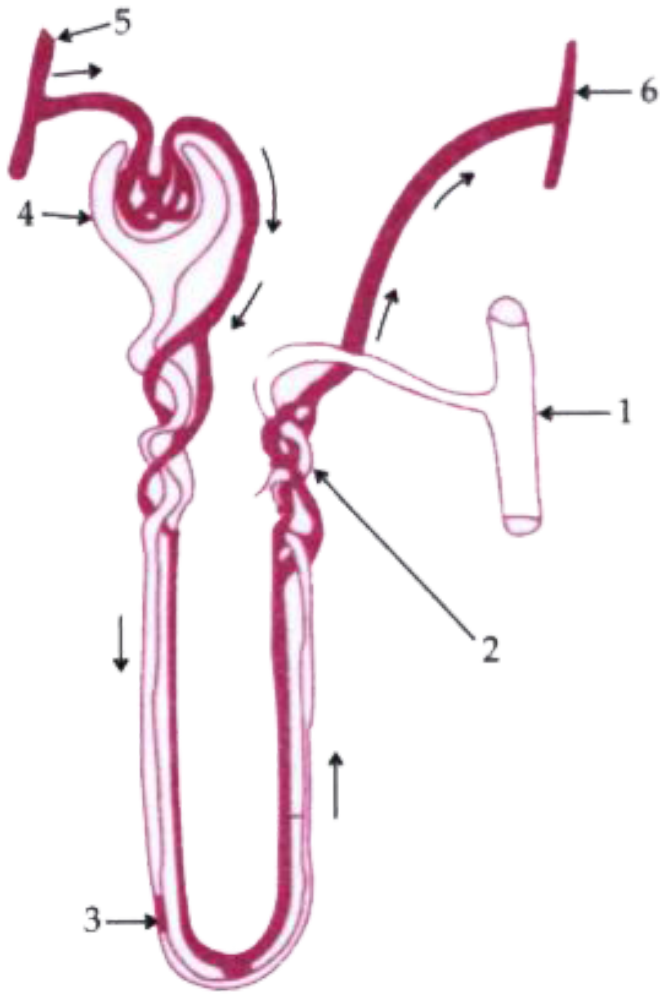


Name the two main stages of urine formation.



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



Name the part of the nephron which lies in the renal medulla.



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51. What is monohybrid cross?



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52. Briefly explain biomedical waste.



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53. All the following are related to innate immunity except



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54. Define the following:

Diapedesis



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55. Briefly explain the Hormones



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56. State any two harmful effects of noise pollution on human health.



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57. Categorize the following activities as per the functions of the Red Cross Society and the WHO.

To suggest quarantine measures to prevent spread of disease.



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58. Categorize the following activities as per the functions of the Red Cross Society and the WHO.

Humanitarian services to victims of war.



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59. Categorize the following activities as per the functions of the Red Cross Society and the WHO.

To educate people in accident prevention.



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60. Categorize the following activities as per the functions of the Red Cross Society and the WHO.

To promote projects for research on disease.



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61. Answer the following questions briefly.

List two reasons for the population explosion

in India.



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62. State Mendel's law of segregation.



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63. Give technical term for the following:

A method of contraception in which the sperm duct is cut and ligated.



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64. Give biological\technical term for the following

Statistical study of human population.



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65. Give technical terms for the following:

The protective covering of the heart.



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66. Give technical terms for the following:

A sudden heritable change in the gene.



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67. The repeated units of DNA molecule.



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68. Give technical terms for the following:

; The fluid portion of blood.





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69. Based on the diagram drawn above in (i), give a suitable term for each of the following description.

The nerve that carries impulse from ear to brain



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70. Give technical/biological term for the following:

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



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71. Give technical terms for the following:

Thin walled sac of skin that covers the testes.



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72. Give technical terms for the following:

The permanent stoppage of the menstrual

cycle in a woman aged 50 years.



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