

BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE PAPER 2011

Section I

1. Define the following:

The mineral element essential for the clotting

of blood



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2. Name the cells of the testes that produce male hormones.



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3. Name the The internal layer of the eye which prevents reflection of light.



4. The structural and functional units of kidney.



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5. Name the following:

That part of the chloroplast where the light reaction of photosynthesis takes place.



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



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7. State main functions of :

Coronary artery



8. State two important functions of medulla oblongata and cerebrum.



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9. What is the main function of thrombocytes?



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10. Aqueous humour and Vitreous humour



11. 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)



12. Give the exact location of

Hydathodes.



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13. Give the exact location of organ of corti.



14. State main functions of:

Give the exact location of Mitral valve.



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15. Give the exact location of the following:

PitUitary gland.



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

Amnion



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17. State whether the following statements are True or False. If False rewrite the correct form of the statement by changing the first or last word only:

Lysosomes is a part of the cell in which chromosomes are present



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18. State whether the following statement is True or False. If False rewrite the correct form of the statement by changing the first or last word only:

Urethra carries urine from kidney to the urinary bladder.



19. Centromere is the organelle of the cell that initiates cell division.



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20. State whether true or false. If false, write correct statement:

Gestation is the process of fixing of the zygote to the uterine wall.



21. State whether the following statements are
True or False. If False rewrite the correct form
of the statement by changing the first or last
word only:

Penicillin obtained from Pencillium notatum is an antibody.



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22. Rewrite and complete the following sentences by inserting the correct word in the

space indicated:

.....vaccine is given to build up immunity against polio.



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23. Phenotype is the observable characteristic which iscontrolled.



24. Fill in the blanks:

Wooden doors usually swell up during rainy season due to



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25. Fill in the blanks:

The blood vessel that begins and ends in capillaries is the.....



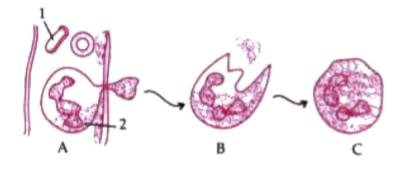
26. Fill in the blanks:

......is the phenomenon of contraction of the cytoplasm from the cell wall.



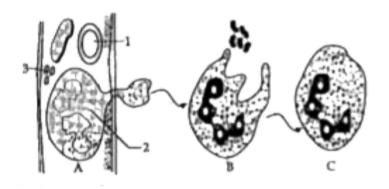
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27. Study the following diagram carefully and then answer the questions that follow:



Name the cells labelled

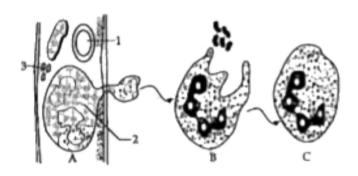
28. Study the diagrams given below and answer the questions tht follow:



Identify the phenomenon occurring in A. Explain the phenomenon.



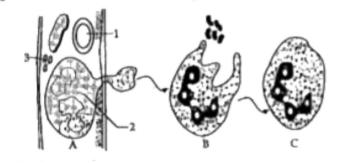
29. Study the diagrams given below and answer the questions tht follow:



Mention two structural differences between 1 and 2



30. Study the diagrams given below and answer the questions that follow:



Name the process occurring in B and C.



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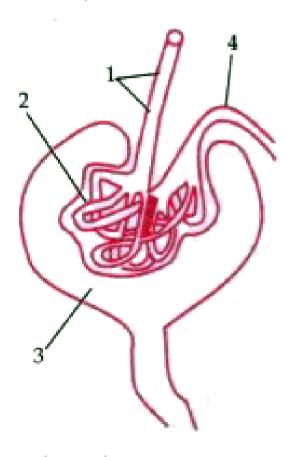
31. Match the items in Column I with that which is most appropriate in Column II.

| | Column I | | Column II |
|-----|----------------|-----|--|
| (1) | Pacemaker | (a) | Associated with static body balance |
| (2) | Stroma | (b) | Chordae tendinae |
| (3) | Afferent nerve | (c) | Site of light reaction |
| (4) | Prolactin | (d) | Motor neuron |
| (5) | Saccules | (e) | S A node |
| | | H | Stimulates production of milk by the mammary gland |
| | | (g) | Site of dark reaction |

| (h) | Transmits impulses from receptor organ to spinal cord |
|-----|---|
| (i) | Secreted by anterior lobe of Pituitary gland |
| (j) | Transfers impulses from spinal cord to muscles. |



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

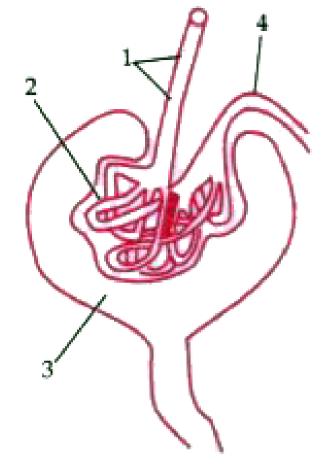


Name the region in the kidney where the above structure is present.



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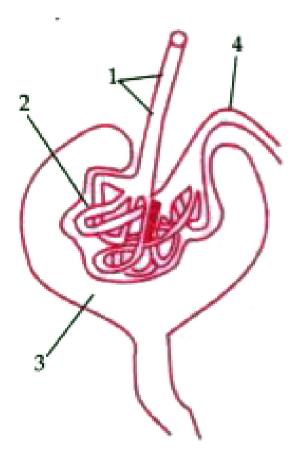
2. Study the diagram given below and then answer the questions that follow:



Name the parts labelled 1, 2, 3 and 4.

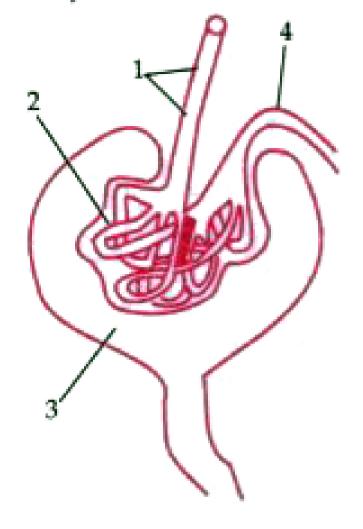


3. Study the diagram given below and then answer the questions that follow:



Name the stages involved in the formation of urine.

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



What is the technical term given to the process occurring in 2 and 3? Briefly describe the process.



5. Give reason for the following

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



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6. Give scientific reasons for the following statements:

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



7. Give reasons:

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



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8. Comment upon the following:

The urine is slightly thicker in summer than in winter.





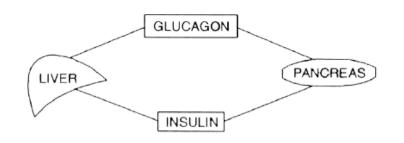
9. Comment upon the following:

People living in hilly regions usually suffer from simple goitre.



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



- (I) Name the cells of the pancreas that produce (a) glucagon (b) insulin.
- (ii) State the main function of (a) glucagon (b) insulin.
- (iii) Why is the pancreas referred to as an exoendocrine gland?
- (iv) Why Is insulin not given orally but is injected into the body?
- (vj What is the technical term for the cells of the pancreas that produce endocrine

hormones?

(vi) Where in the body is the pancreas located?



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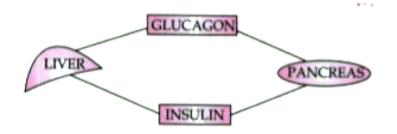
11. Study the diagram given below and then answer the questions that follow:



State the main function of (1) glucagon, (2) insulin.



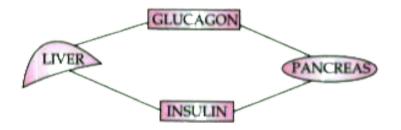
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Why is the pancreas referred to as ar exoendocrine gland?



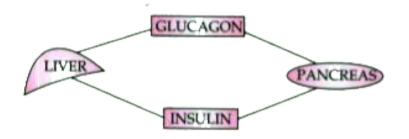
13. Study the diagram given below and then answer the questions that follow:



Why is insulin not given orally but is injected into the body?



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

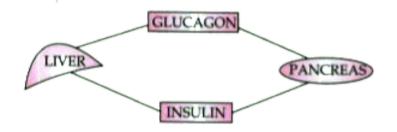


What is the technical term for the cells of the pancreas that produce endocrine hormones?



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



Where in the body is the pancreas located?



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

What is meant by power of accommodation of the eye?



17. 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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18. 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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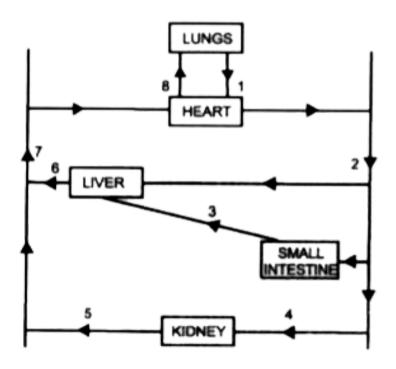
19. With reference to the functioning of the eye, answer the questions that follow:

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

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



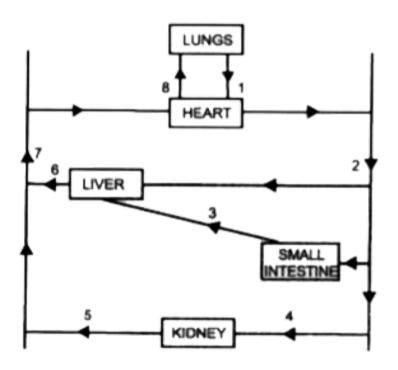
20. Given below the simplified pathway of the circulatory system of man:



Name the blood vessels labelled 1. 3. 6. and 7.



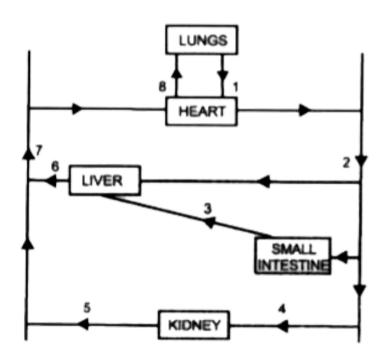
21. Given below the simplified pathway of the circulatory system of man:



Name the blood vessel that supplies the walls of the heart with oxygen.



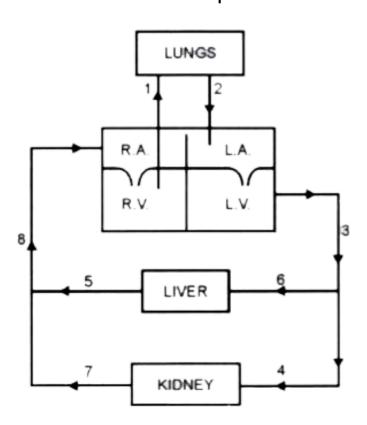
22. Given below the simplified pathway of the circulatory system of man:



Draw a neat labelled diagram of the blood vessel numbered 2' as seen in a cross-section.



23. Given below is a diagrammatic representation of a certain part of the process of circulation of blood in man. Study the same and then answer the questions that follow:



Mention two structural differences between blood vessels '3' and '8



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

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



25. 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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26. 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 halance.



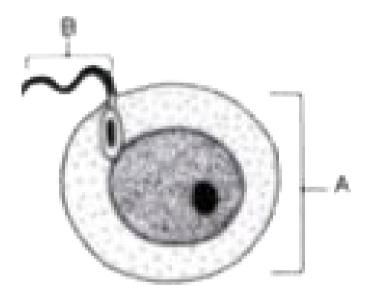
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27. With reference to the human ear, answer the questions that follow:

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



28. The diagram given below represents two reproductive cells A and B. Study the same and then answer the questions that follow:



- (i) Identify the reproductive cells A and B.
- (ii) Name the specific part of the reproductive system where the above cells are produced

(iii) Where in the female reproductive system do these cells unite?

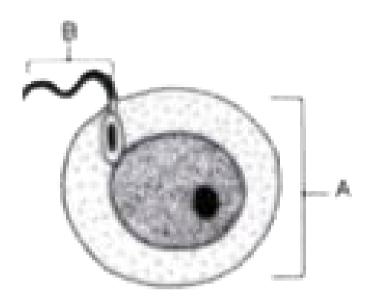
(iv) Name the main hormones secreted by the(1) ovary (2) testes.

(v) Name an accessory gland found in the male reproductive system and state the function of its secretion.



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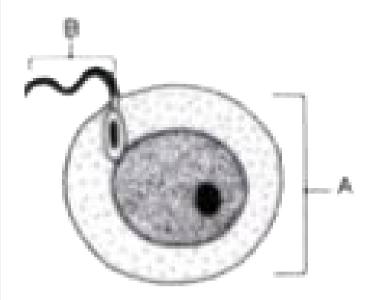
(iv) Name the main hormones secreted by the

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30. The diagram given below represents two reproductive cells A and B. Study the same and then answer the questions that follow:



do these cells unite?

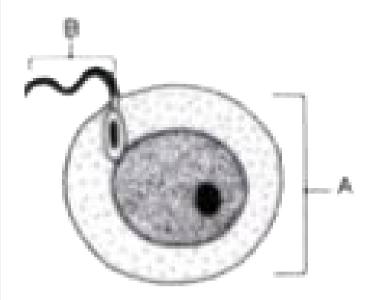
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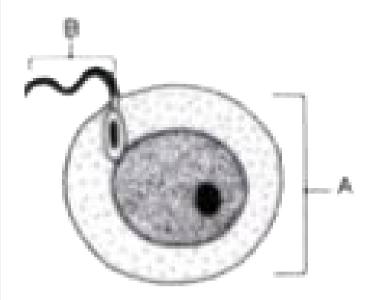
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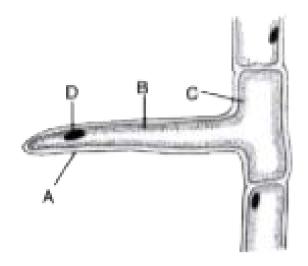
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33. The given diagram represents a layer of epidermal cells showing a fully-grown root hair. Study the diagram and answer the questions that follow:

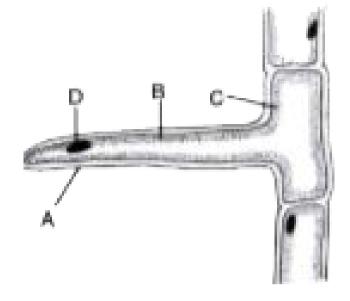


Name the parts labelled A, B, C and D.



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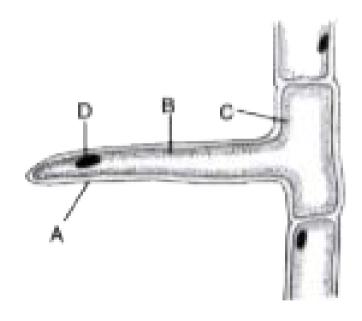
34. The given diagram represents a layer of epidermal cells showing a fully-grown root hair. Study the diagram and answer the questions that follow:



The root hair cell is in a turgid state. Name and explain the process that caused this state



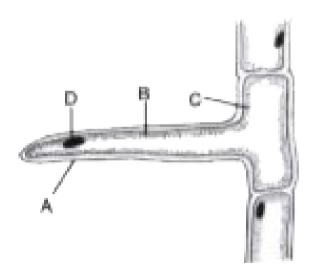
35. The given diagram represents a layer of epidermal cells showing a fully-grown root hair. Study the diagram and answer the questions that follow:



Mention one distinct difference between the parts labelled A and B.

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36. The given diagram represents a layer of epidermal cells showing a fully-grown root hair. Study the diagram and answer the questions that follow:



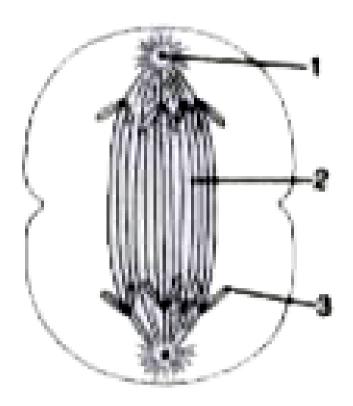
Draw a diagram of the above root hair cell as

it would appear when a concentrated solution of fertilizers is added near it.



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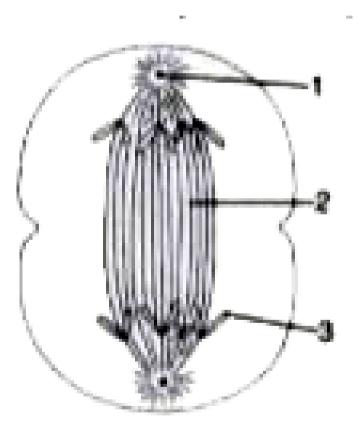
37. The diagram given below represents a stage during cell division. Study the same and then answer the questions that follow:



Name the parts labelled 1, 2 and 3.



38. The diagram given below represents a stage during cell division. Study the same and then answer the questions that follow:

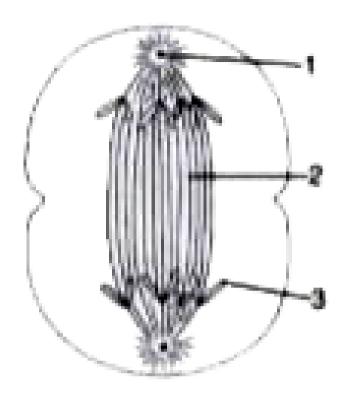


Identify the above stage and give a reason to support your answer.



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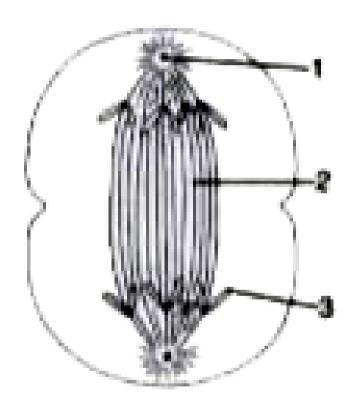
39. The diagram given below represents a stage during cell division. Study the same and then answer the questions that follow:



Mention where in the body this type of cell division occurs.



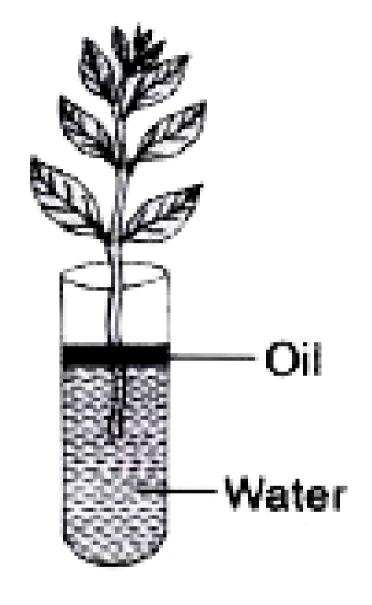
40. The diagram given below represents a stage during cell division. Study the same and then answer the questions that follow:



Name the parts labelled 1, 2 and 3.

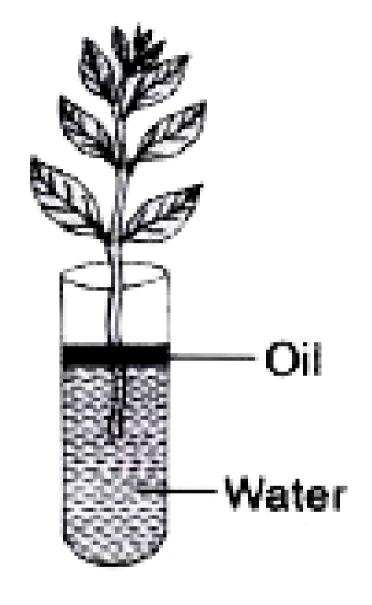


41. Study the diagram given below and answer the questions that follow:



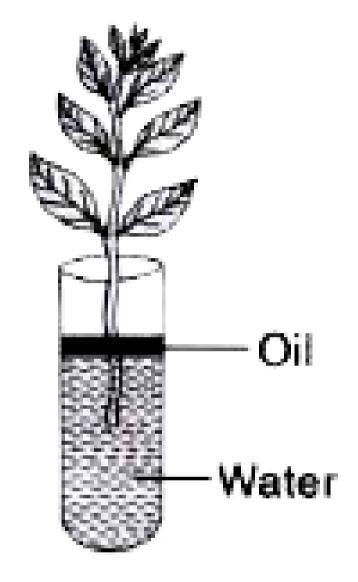
Name the process being studied in the experiment.

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



Name the process being studied in the experiment.

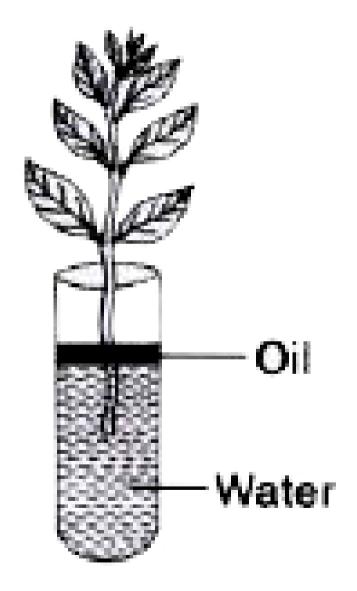
43. Study the diagram given below and answer the questions that follow:



Why is oil placed over water



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

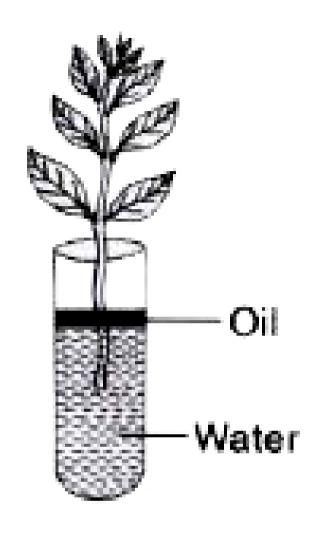


What do we observe with regard to the level of water when this set-up is placed in (1) bright sunlight (2) humid conditions (3) windy day



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



Mention any three adaptations found in plants to overcome the process studied in the experiment.

46. Given below is a table comparing the effects of sympathetic and parasympathetic nervous system for four feature (1-4). Which one feature is correctly described?

| S. Feature No. | Sympathetic nervous system | Parasympa- thetic ner- vous system |
|--|------------------------------------|--|
| (1) Salivary glands (2) Pupil of the eye | Stimulates secretion Dilates | Inhibits secretion Constricts |
| (3) Heart rate | Decreases | Increases |
| (4) Intestinal peristalsis | | Inhibits |



47. List four major activities of the Red Cross.



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48. Define antiseptics and disinfectants. How do these differ? Give one example of a substance which acts both as an antiseptic and disinfectant.



49. Write down the difference between the following pairs as indicated within the brackets:

Erythrocytes and leucocytes (function).



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50. Write down the difference between the following pairs as indicated within the brackets:

Guttation and bleeding in plants (cause)



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51. Expand the abbreviation :

NADP



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52. Differentiate as directed :

Monohybrid and Dihybrid cross (Phenotypic ratio)



