BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE PAPER 2012

Section I

1. Name the following :

The phenomenon by which living or dead

plant cells absorb water by surface attraction .

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2. In frog each cardiac cycle begin with the contraction of

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3. Name the The organ where urea is produced.

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4. Name the hormone associated with resorption of water from the urine in the distal convoluted tubule.

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5. The chemical substances produced by some microbes which can kill or tetard the growth of other microbes are called

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6. State the main functions of:

Chordae tendineae

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7. State the main functions of:

Lymphocytes

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8. Give the exact location and one function of the following:

Seminiferous tubule.

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9. Give exact location and function of

Thylakoids

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10. Name the hormone responsible for the following functions

Beta cell of pancreas (function).

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11. Give the exact location of

Lenticells.

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12. Give the exact location and one function of the following:

Prostate gland.

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13. Give the exact location of the following :

Thyroid gland

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14. Give the (a) specific function of Centrosome. (b) Exact location of centrosome.

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15. State main functions of :

Give the exact location of Mitral valve.

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16. Given below are sets of five terms each. In each case rewrite the terms in logical sequence as directed at the end of each statement. An example has been done for you:

Example: Cortical cells, Root hair, xylem, Soil water, endodermis (absorption of water by the plants)

Answer : Soil water, Root hair, cortical cells, endodermis, xylem.

Active immunity, Antigen, Antibody, Bacteria, Lymphocytes (defence mechanism of the body).

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

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

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18. Rewrite in a correct logical sequence :

Oval window. Tympanum, Cochlea, Auditory canal, Ear ossicles (path through which a vibration of sound is transferred in the human ear).

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19. Given below are sets of five terms each. In each case rewrite the terms in logical sequence as directed at the end of each

statement. An example has been done for you:

Example: Cortical cells, Root hair, xylem, Soil water, endodermis (absorption of water by the plants)

Answer : Soil water, Root hair, cortical cells, endodermis, xylem.

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

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20. Given below is a set of five terms. Rewrite the terms in logical sequence as directed at the end of each statement,

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

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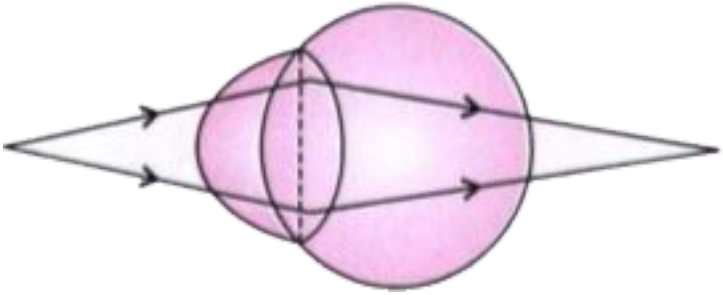
21. Study the following diagram carefully and then answer the questions that follow. The

diagram is depicting a defect of the human eye :



Identify the defect shown in the diagram.

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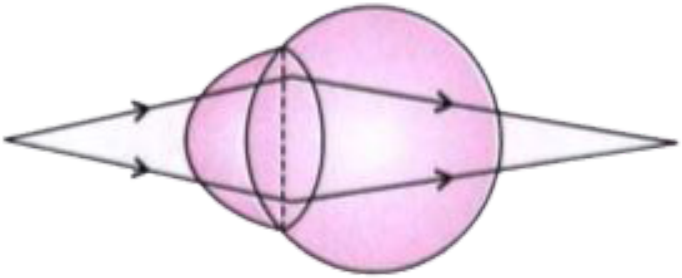
22. Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human

eye :



Give two possible reasons for the above defect.

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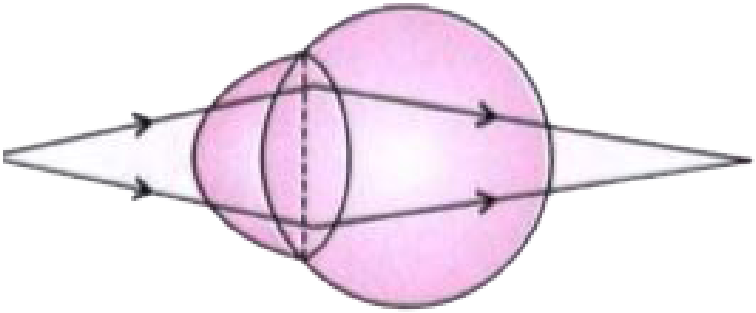
23. Study the following diagram carefully and then answer the questions that follow. The diagram is depicting a defect of the human

eye :



Draw a neat labelled diagram to show how the above defect can be rectified.

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24. Match the items in Column A with that which is most appropriate in Column B.

Rewrite the matching pairs :

Column A	Column B
(1) Potometer	(a) Antiseptic
(2) Hypothalamus	(b) Disinfectants
(3) Formalin**	(c) Vasectomy
(4) Contraception in males	(d) Sudden change in genes
(5) Mutation	(e) Pituitary gland
	(f) Tubectomy
	(g) Transpiration
	(h) Thyroid gland
	(i) Alleles
	(j) Photosynthesis

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25. Given below are six sets with four terms each. In each set a term is an odd one and

cannot be grouped in the same category to which the other three belong. Identify the odd one in each set and name the category to which the remaining three belong. The first has been done for you as an example.

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

[3]

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Section I Choose The Correct Answer

1. Which kind of immunity, active or passive, is produced by vaccination? Name the disease against which protection is provided by BCG vaccine.

A. Poliomyelitis

B. Tuberculosis

C. Malaria

D. Whooping cough.

Answer: A

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2. Choose the correct answer from the given four options :

A plant is kept in a dark cupboard for about 48 hours before conducting any experiment on photosynthesis to

A. Remove starch from the plant.

B. Ensure that starch is not translocated from the leaves.

C. Remove chlorophyll from the leaf of the plant.

D. Remove starch from the experimental leaf.

Answer:

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3. Which one of the following is the correct difference between rod cells and cone cells of our retina ?

A. Retina

B. Cornea

C. Choroid

D. Sclera

Answer: A

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

A reflex arc in man is best described as movement of stimuli from:

A. Receptor cell, sensory neuron, relaying neuron, effector muscles.

B. Receptor cell, efferent nerve, relaying neuron, muscles of the body.

C. Receptor cell, spinal cord, motor neuron, relaying neuron.

D. Receptor cell, synapse, motor neuron, relaying neuron.

Answer: A

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5. Choose the correct answer from the given four options :

NADP is expanded as

A. Nicotinamide adenosine dinucleotide phosphate.

B. Nicotinamide adenine dinucleotide phosphate

C. Nicotinamide adenine dinucleous phosphate

D. Nicotinamide adenosine dinucleous phosphate.

Answer: B

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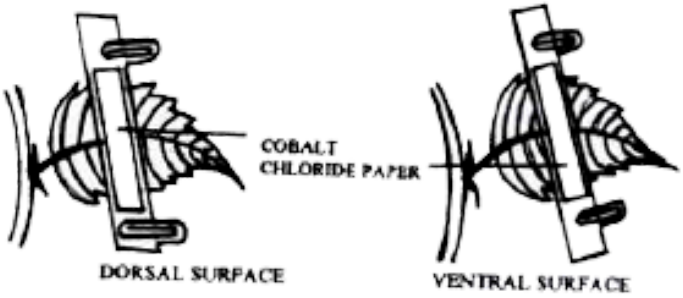
Section Ii

1. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



Name the physiological process being studied.

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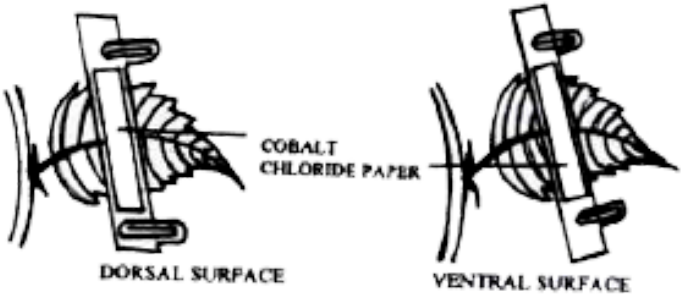
2. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



Explain the process being studied.

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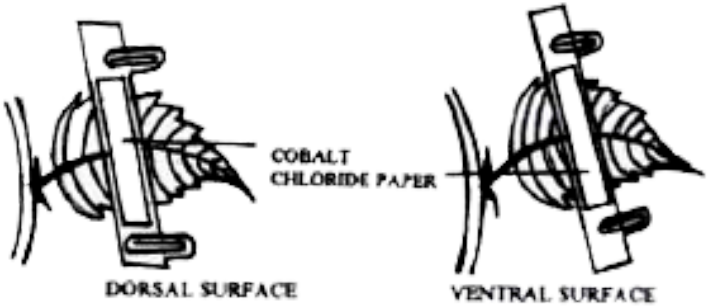
3. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



What is the aim of the above experiment ?

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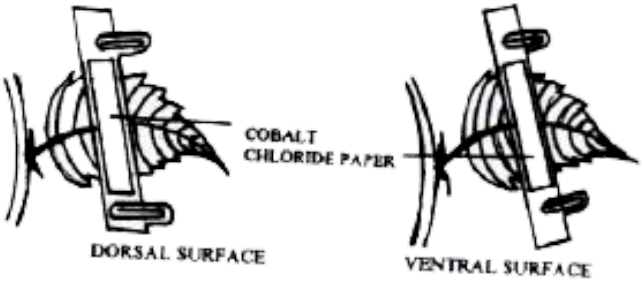
4. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



What would you observe in the experimental set up after an hour? Give a reason to support your answer.

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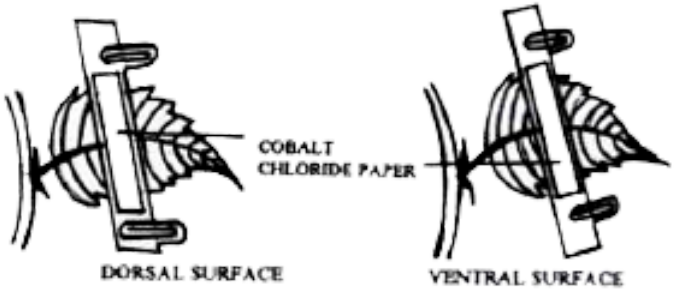
5. Given below is an experimental set-up to demonstrate a particular process. Study the same and answer the questions that follow :



Mention any three adaptations found in plants to overcome the physiological process mentioned in being studied.

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6. Give technical term for:

A membrane which allows the passage of molecules selectively.

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7. Give biological/ technical terms for the following:

The suppressed allele.

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8. Give technical term to the following:

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

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9. Give biological technical terms for the following

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

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10. Give technical term to the following:

Protective membranes covering the human brain and spinal cord.

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11. Give technical term to the following:

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

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12. Give technicallbiological term for the following:

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

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13. Give technical term :

The phase in the menstrual cycle in which the remnant of follicle in the ovary turns into corpus luteum.

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14. Give biologicaVtechnical term for the following

Statistical study of human population.

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15. Give the biological terms for each of the following:

Introduction of weakened germs into the body to develop resistance against a disease.

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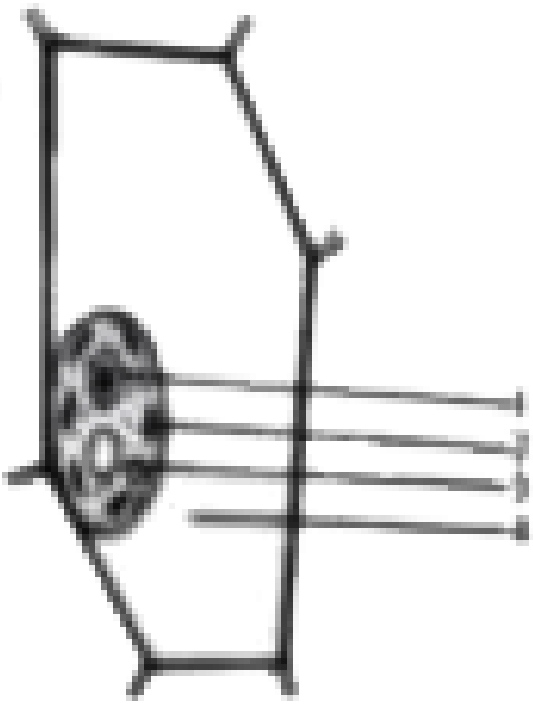
16. Given alongside is the diagram of a cell as seen under the microscope after being placed in a solution.



What technical term is used for the state/ condition of the cell given ?

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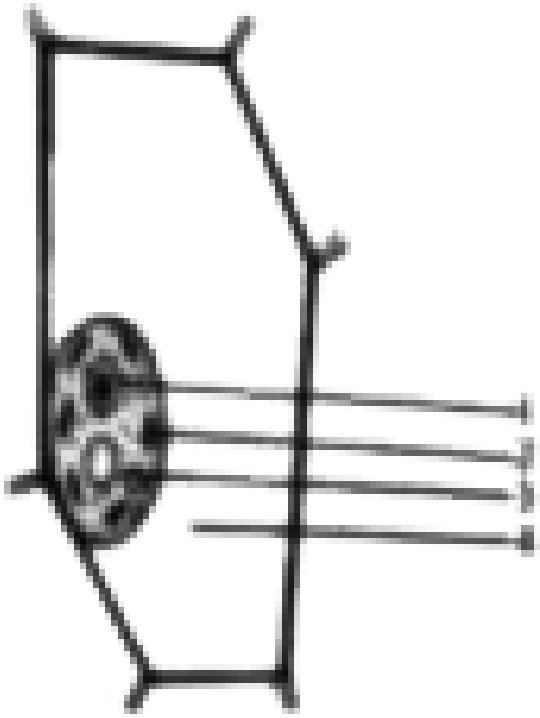
17. Given alongside is the diagram of a cell as seen under the microscope after being placed in a solution.



Name the parts numbered 1-4.

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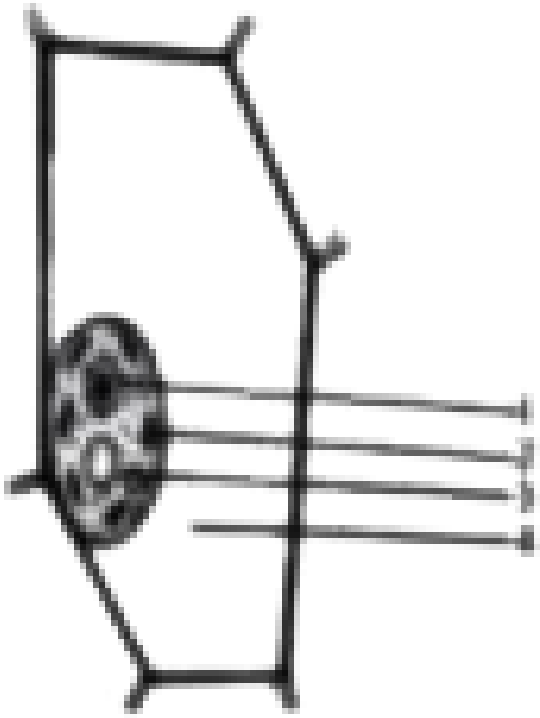
18. Given alongside is the diagram of a cell as seen under the microscope after being placed in a solution.



Name the parts numbered 1-4.

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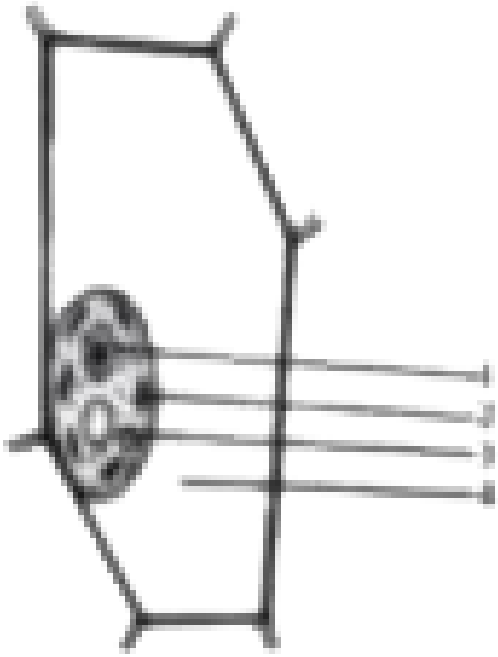
19. Given alongside is the diagram of a cell as seen under the microscope after being placed in a solution.



Is the cell given above plant cell or animal cell ?

Give two reasons in support of your answer as evident from the diagram.

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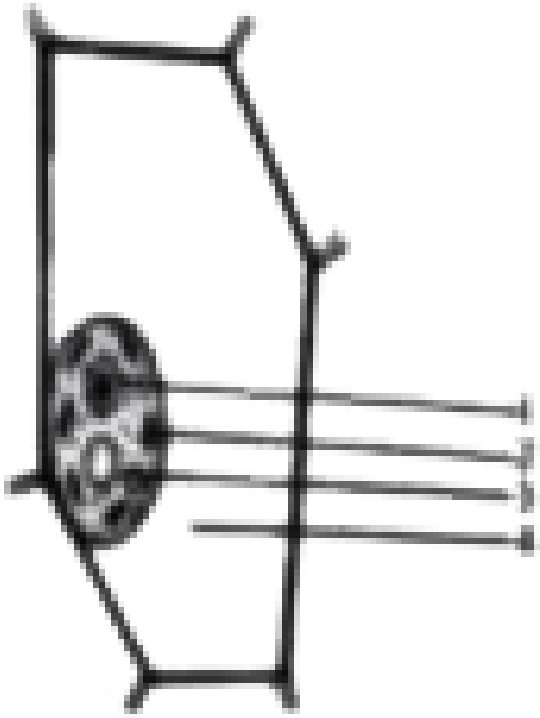
20. Given alongside is the diagram of a cell as seen under the microscope after being placed in a solution.



Name the parts numbered 1-4.

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21. Differentiate between the following pair on the basis of what is mentioned within bracket.

Natality and mortality (definition).

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22. Differentiate between the following pairs as directed in the brackets

Stoma and stroma (structure)

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23. Differentiate between the following:

Acromegaly and Cretinism (symptoms)

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24. Differentiate between the following:

Guttation and transpiration

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

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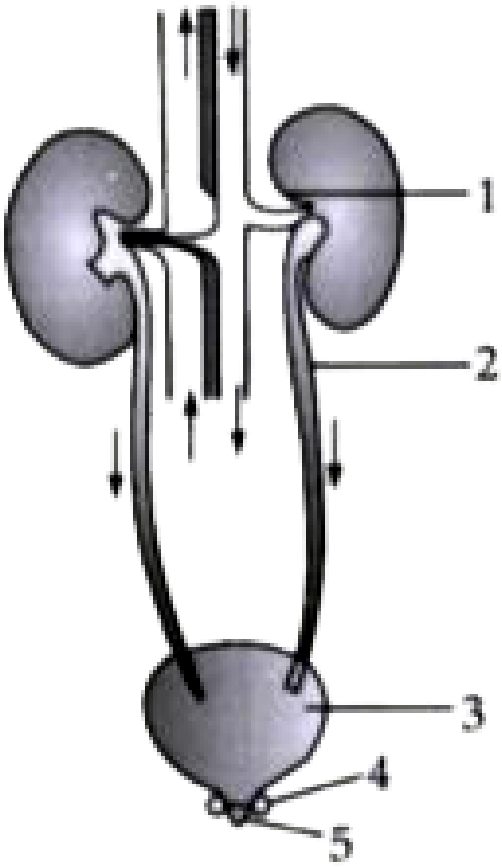
26. The diagram given below represents an organ system in the human body. Study the same and answer the questions that follow:



Identify the system.

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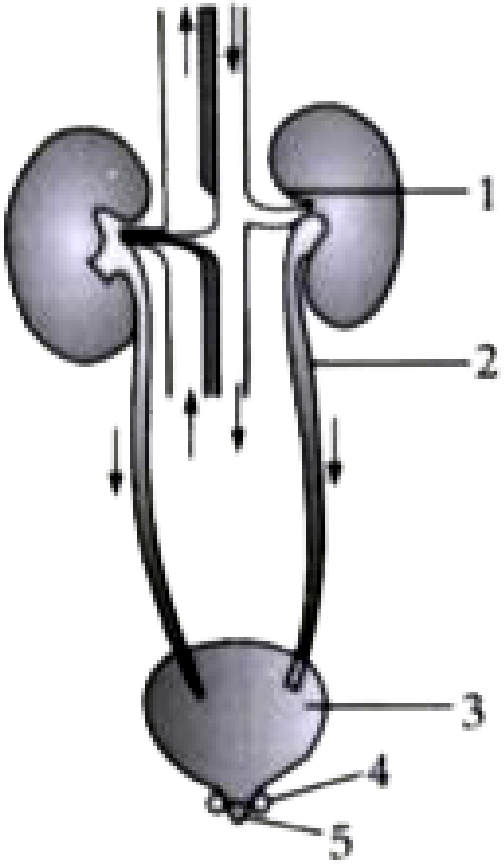
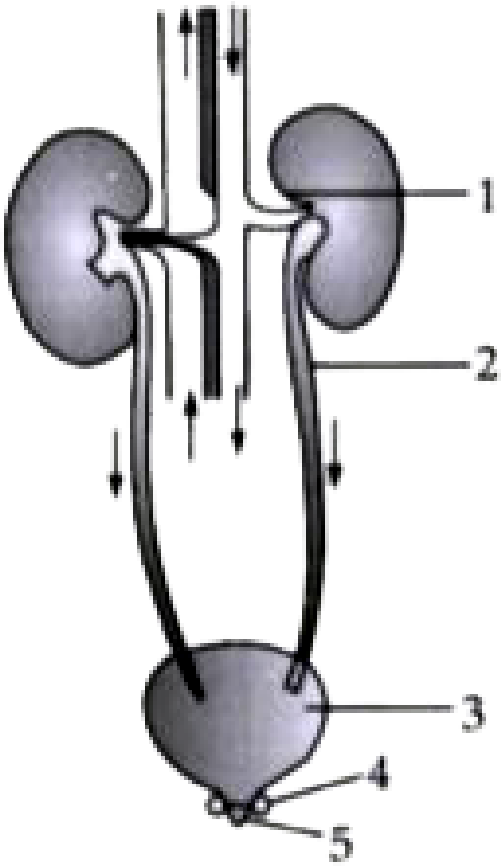
27. The diagram given below represents an organ system in the human body. Study the same and answer the questions that follow:



Identify the system.

Watch Video Solution

28. The diagram given below represents an organ system in the human body. Study the same and answer the questions that follow:



Identify the system.

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29. Briefly explain the following physiological processes:

Significance of osmosis

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30. Briefly explain the Allele

Watch Video Solution

31. Explain briefly :

Pulse.

Watch Video Solution

32. Explain the term Reflex action.

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33. An electrical synapse differs from a chemical synapse in that the electrical synapse

:

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

(i) Name the part labelled A. Name any two

hormones produced by the part labelled A.

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

(1) fertilisation takes place?

(2) fertilisation does not take place ?

(iii) Where does fertilisation occur ?

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

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

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

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

(1) fertilisation takes place?

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(iii) Where does fertilisation occur ?

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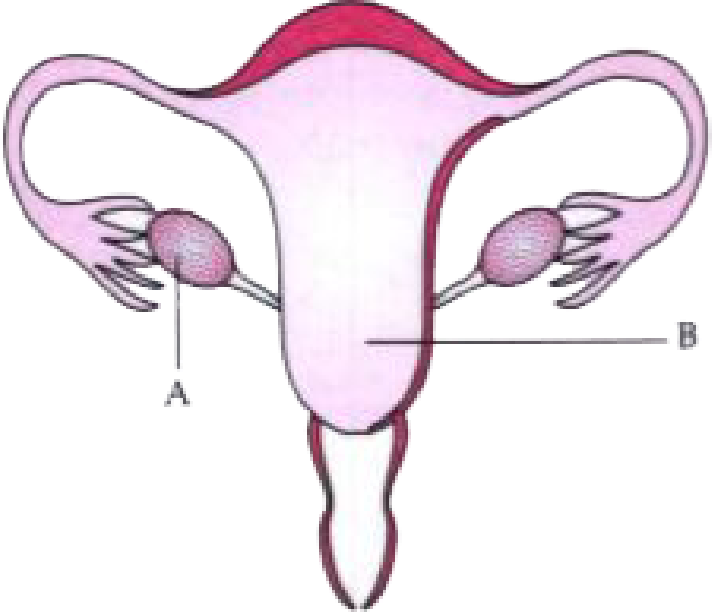
36. Study the diagram given below and then answer the questions that follow :



Where does fertilization occur ?

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

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

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

(1) fertilisation takes place?

(2) fertilisation does not take place ?

(iii) Where does fertilisation occur ?

(iv) Draw a neat diagram of the human sperm

as seen under high magnification and label the following parts: (a) Acrosome (b) Mitochondria.

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38. A homozygous plant having round (R) and yellow (Y) seed is crossed with a homozygous plant having wrinkled (r) and green (y) seeds. Give the scientific name of the plant on which Mendel conducted his hybridization experiments.

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39. A homozygous plant having round (R) and yellow (Y) seed is crossed with a homozygous plant having wrinkled (r) and green (y) seeds. Give the genotype of F_1 generation.

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40. A homozygous plant having round (R) and yellow (Y) seed is crossed with a homozygous plant having wrinkled (r) and green (y) seeds.

Give the dihybrid phenotypic ratio and the phenotype of the offspring of the F_2 generation when two plants of the F_1 generation are crossed.

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41. A homozygous plant having round (R) and yellow (Y) seed is crossed with a homozygous plant having wrinkled (r) and green (y) seeds. Name and state the law which explains the dihybrid ratio.

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42. A homozygous plant having round (R) and yellow (Y) seed is crossed with a homozygous plant having wrinkled (r) and green (y) seeds. Give the possible combination of gametes that can be obtained from F_1 hybrid.

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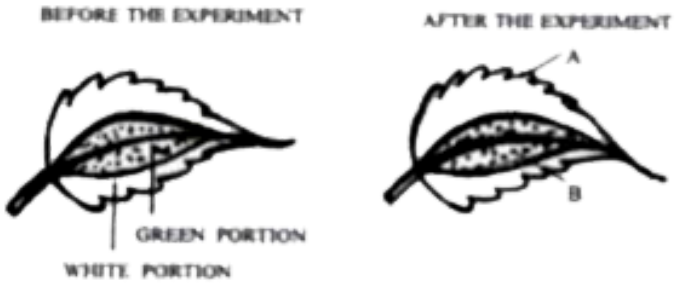
43. The diagram given below is an experiment conducted to study a factor necessary for

photosynthesis Observe the diagram and then answer the following questions



What is the aim of the experiment

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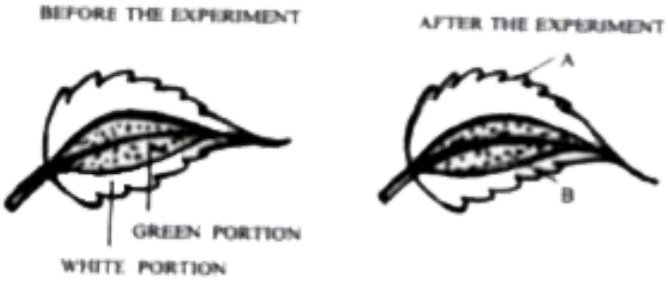
44. The diagram given below is an experiment conducted to study a factor necessary for photosynthesis Observe the diagram and then

answer the following questions



Name the test performed on the leaf and the solution used for the test

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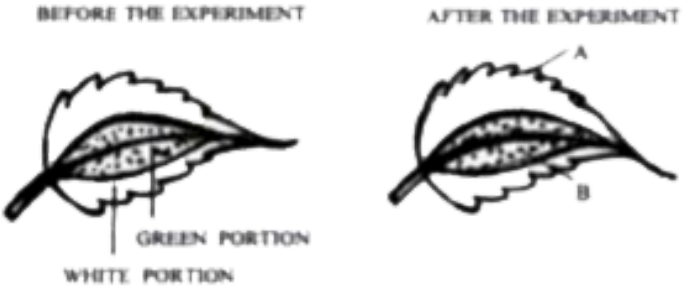
45. The diagram given below is an experiment conducted to study a factor necessary for photosynthesis Observe the diagram and then

answer the following questions



What type of leaf was used for the experiment? Give an example

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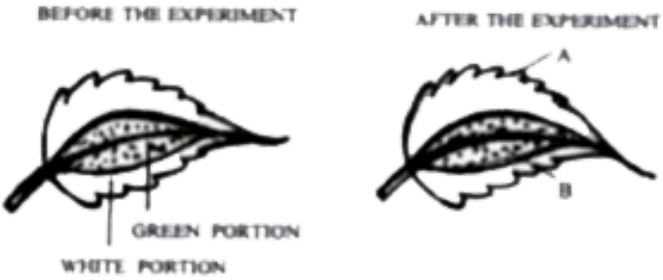
46. The diagram given below is an experiment conducted to study a factor necessary for photosynthesis Observe the diagram and then

answer the following questions



What is the expected result of the above test on the parts labelled A and B ?

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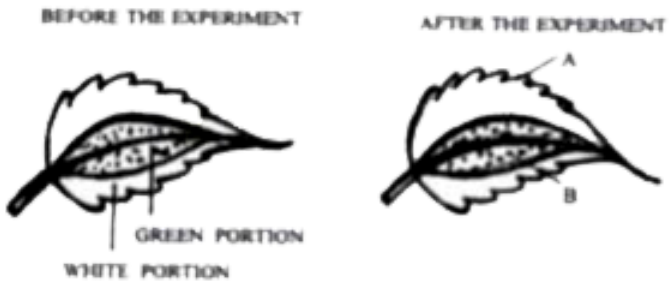
47. The diagram given below is an experiment conducted to study a factor necessary for photosynthesis Observe the diagram and then

answer the following questions



Give a balanced chemical equation to represent the process of photosynthesis

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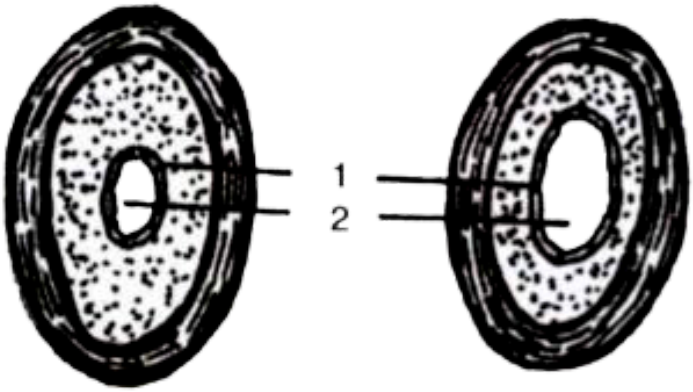
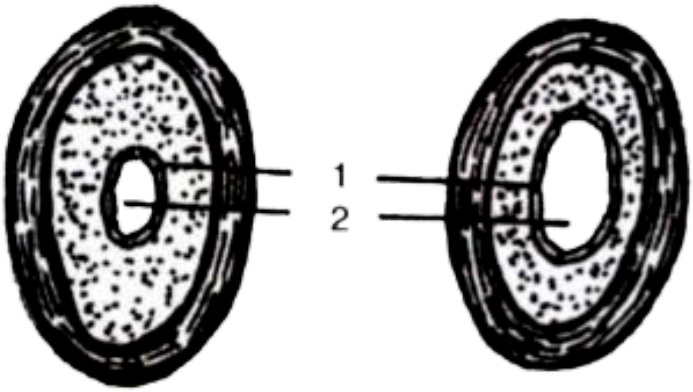
48. The diagrams given below show the cross-section of two kinds of blood vessels :



Name the parts numbered 1 and 2

Watch Video Solution

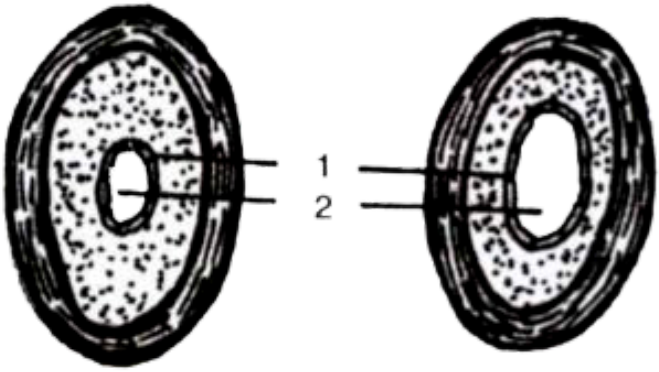
49. The diagrams given below show the cross-section of two kinds of blood vessels :



Name the parts numbered 1 and 2

Watch Video Solution

50. The diagrams given below show the cross-section of two kinds of blood vessels :



When are the sounds "LUBB" and "DUP produced during a heartbeat?

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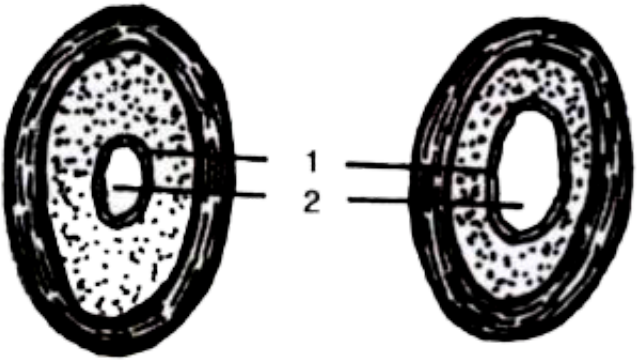
51. The diagrams given below show the cross-section of two kinds of blood vessels :



Name the blood vessel that

(1) begins and ends in capillaries

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52. Draw a well labelled diagram of a 'Neuron' and name the following parts: Node of Ranvier

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53. Name the following: The parts of human brain concerned with

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

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54. List any two activities of WHO.

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55. Draw a well labelled diagram of metaphasic chromosome.

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56. Answer the following questions briefly.

List two reasons for the population explosion in India.

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

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