



BIOLOGY

BOOKS - EVERGREEN BIOLOGY (ENGLISH)

SAMPLE PAPER 2015

Section I

1. Give technical term for:

The process of uptake of mineral ions against

the concentration gradient using energy from cell.



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2. Name the following:

The form in which glucose is stored in liver.



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3. Name the following:

The vein that carries oxygenated blood.



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4. A cross between two parents having one pair of contrasting characters.



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5. Name the following :

The structure formed by the villi of the embryo and the uterus of the mother.



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6. State whether the following statements are true or false. If false, rewrite the correct statement by changing the bold/dark word only.

Alpha cells of pancreas secrete **Insulin**.



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7. The statements given below are False. Rewrite the correct form of the statement by

changing the word which is underlined :

Formalin is an example of an Antiseptic.



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8. The statements given below are False.

Rewrite the correct form of the statement by

changing the word which is underlined :

CNG is mainly responsible for the formation of acid rain.



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9. The statements given below are False.

Rewrite the correct form of the statement by changing the word which is underlined :

Sulfadiazine is an example of an (Antiseptic) .



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10. The statements given below are False.

Rewrite the correct form of the statement by changing the word which is underlined :

Cretinism is caused due to deficiency of Adrenaline .



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11. Mention the exact location of the following structures : Thylakoids.



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12. Mention the exact location of the following structures : Organ of Corti.



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13. Mention the exact location of the Lenticels structures



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14. Mention the exact location of the Bicuspid Valve structures :

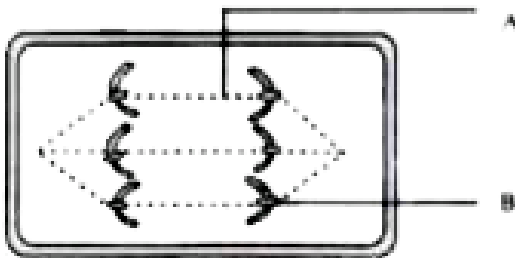


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15. Mention the exact location of the following structures :Loop of Henle.

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16. The diagram given below represents a certain stage of mitosis :



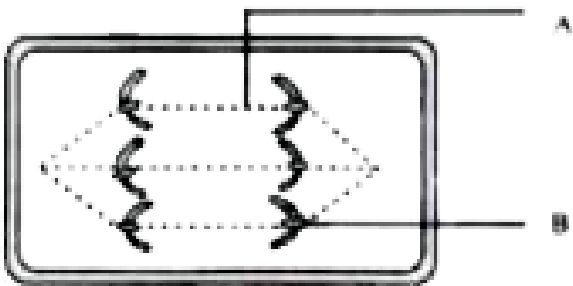
Identify the stage of cell division.





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17. The diagram given below represents a certain stage of mitosis :

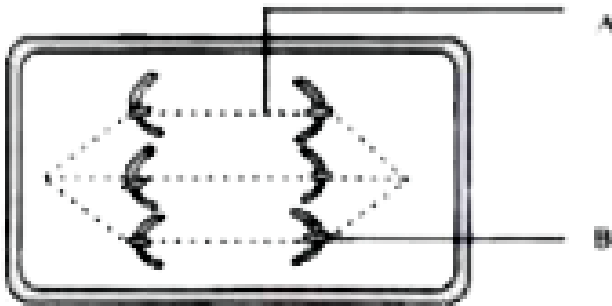


Name the parts labelled A and B.



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18. The diagram given below represents a certain stage of mitosis :

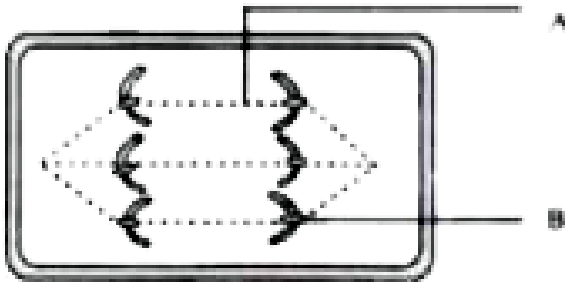


What is the unique feature observed in this stage?



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19. The diagram given below represents a certain stage of mitosis :



How many daughter cells are formed from this type of cell division?



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20. Given below is an example of a certain structure and its special functional activity. On a similar pattern fill in the blanks with suitable functions:

Example : Chloroplast and Photosynthesis :

Xylem and _____



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21. Given below is an example of a certain structure and its special functional activity. On

a similar pattern fill in the blanks with suitable functions:

Example : Chloroplast and Photosynthesis :

Ciliary Body and _____



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22. Given below is an example of a certain structure and its special functional activity. On a similar pattern fill in the blanks with suitable functions:

Example : Chloroplast and Photosynthesis :

Seminiferous Tubule and _____



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23. Given below is an example of a certain structure and its special functional activity. On a similar pattern fill in the blanks with suitable functions:

Example : Chloroplast and Photosynthesis :

Thyroid gland and _____



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24. Given below is an example of a certain structure and its special functional activity. On a similar pattern fill in the blanks with suitable functions:

Example : Chloroplast and Photosynthesis :

Eustachian Tube and _____



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25. Rewrite by inserting key word in the space indicated by '^'.

The phenomenon of loss of water through a cut stem or injured part of plant is called

..... .



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26. Rewrite and complete the following sentence by inserting the correct word in the space indicated :

..... is the scientific name of garden pea, which Mendel used for his experiments.



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27. A fluid that occupies the larger cavity of the eye ball behind the lens is



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28. Fill in the blanks :

Oxygen combines with haemoglobin present in RBC and forms



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29. Rewrite and complete the following sentences by inserting the correct word in the space indicated :

..... causes corrosion of the marble or brick surface.



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30. Match the items in Column 'A' with those which are most appropriate in Column 'B'. Rewrite the matching pairs as shown in the example:

Example: Fibrinogen-Clotting of blood.

<i>Column A</i>	<i>Column B</i>
(1) <i>Allele</i>	(a) <i>Control of automobile exhaust</i>
(2) <i>Leydig cells</i>	(b) <i>Tourniquet</i>
(3) <i>Utriculus</i>	(c) <i>Alternate forms of genes</i>
(4) <i>Snake bite**</i>	(d) <i>Dynamic equilibrium</i>
(5) <i>Euro IV norms</i>	(e) <i>Testosterone</i>
	(f) <i>Sudden change in genes</i>
	(g) <i>Static equilibrium</i>



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Section I Choose The Correct Answer

1. Select and rewrite the correct answer to the given statements from the four choices given

below each statement.

A single highly coiled tube where sperms are stored, gets concentrated and mature is known as :

1)Epididymis

2)Vasa efferentia

3)Vas deferens

4)Seminiferous tubules.

A. Epididymis

B. Vas efferentia

C. Vas deferens

D. Seminiferous tubule.

Answer: A



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2. Chromosomes get aligned at the centre of the cell during :

A. Metaphase

B. Anaphase

C. Prophase

D. Telophase

Answer: A



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3. BCG vaccine is effective against

A. Cholera

B. Mumps

C. Tuberculosis

D. Measles

Answer:



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4. Which one of the following is mainly associated with the maintenance of the posture ?

A. Cerebrum

B. Cerebellum

C. Thalamus

D. Pons

Answer: B



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5. Choose the correct option from the four given below:

An example of non-biodegradable waste is

A. Vegetable peels

B. Sewage

C. Livestock waste

D. DDT

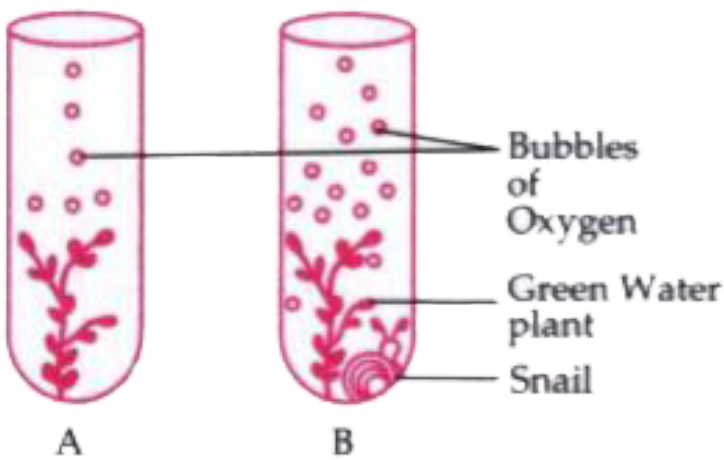
Answer: D



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Section II

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

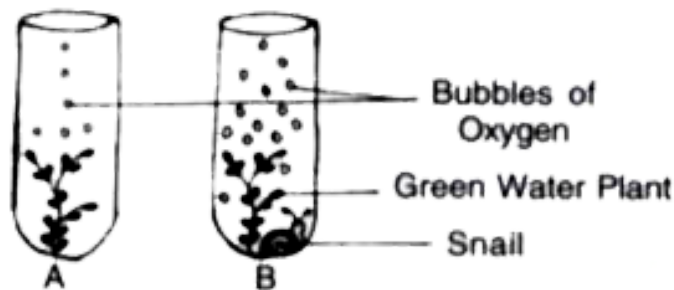


Name the physiological process that releases the bubbles of oxygen.

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

plant and a snail. Both test tubes are kept in sunlight Answer the questions that follow



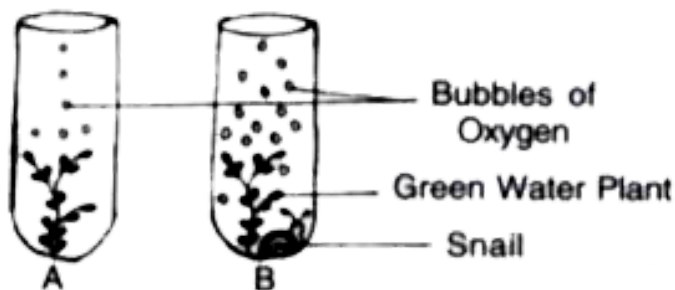
Explain the physiological process as mentioned above



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

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

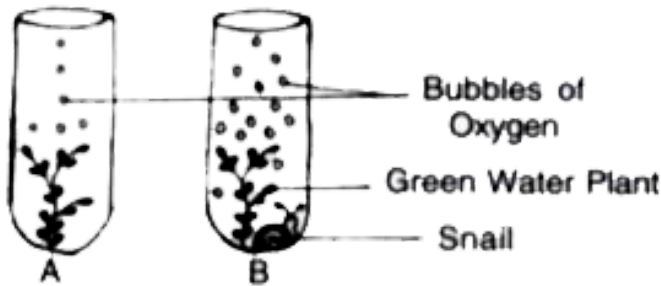


What is the purpose of keeping a snail in test-tube "B"?



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

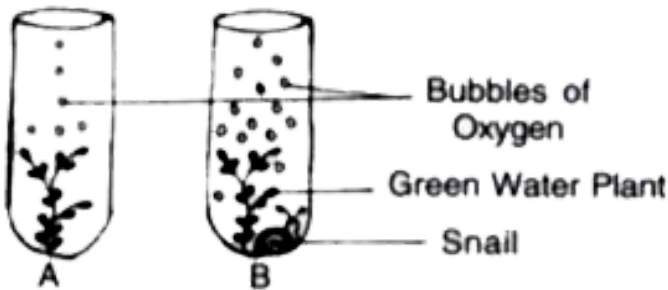


Why does test-tube 'B' have more bubbles of oxygen?



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

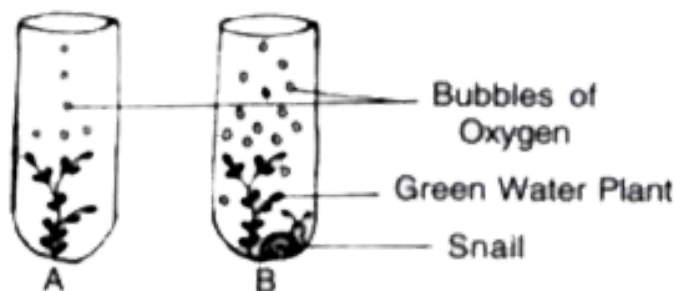


Give an example of a water plant that can be used in the above experiment.



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



Write the overall chemical reaction for the above process.



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7. Give the biological/technical term for the following:

A mixture of smoke and fog.



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8. Give the biological/technical terms for the following:

Capacity of our body to resist diseases.



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9. Give the biological/technical terms for the following:

Fixing of developing zygote on the uterine wall.



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10. Give the biological/technical terms for the following:

The permanent stoppage of menstruation at about the age of 45 years in a female.



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11. Reabsorption of water from distal parts of the tubules is facilitated by hormone _____.



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12. Give technical term to the following:

A thin membrane covering the entire front part of the eye.



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13. Give technical term to the following:

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



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14. Give technical term for the following:

The number of persons living per square kilometre at any given time.



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15. Give biological technical terms for the following

The sound produced when the atrioventricular valves close the heart.



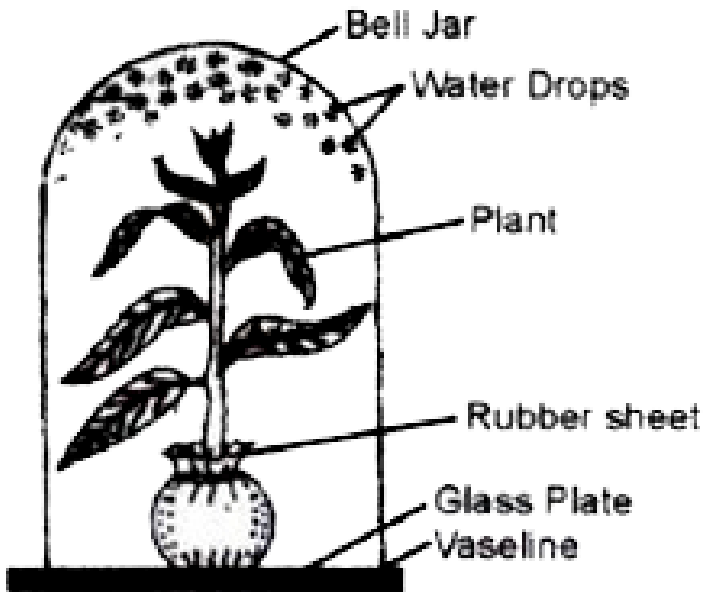
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16. The process by which a white blood cell or an amoeba engulfs bacteria is called phagocytosis.



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17. Given below is an apparatus which was setup to investigate a physiological process in plants. The setup was placed in bright sunlight. Answer the questions that follow:

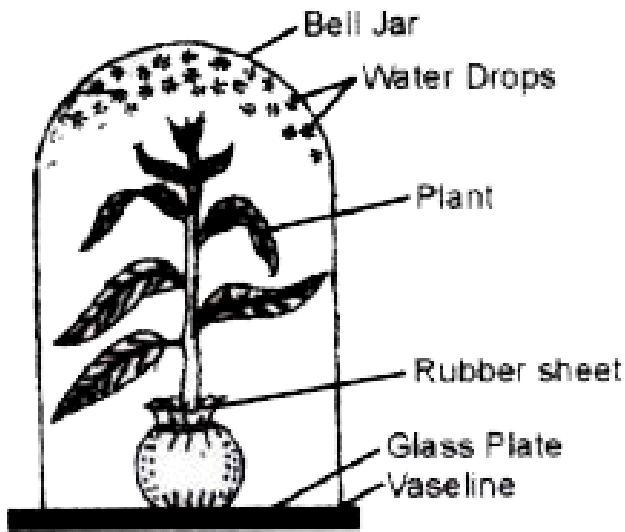


Name the process being studied. Define the process.



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18. Given below is an apparatus which was setup to investigate a physiological process in plants. The setup was placed in bright sunlight. Answer the questions that follow:



Why was the pot enclosed in a rubber sheet ?

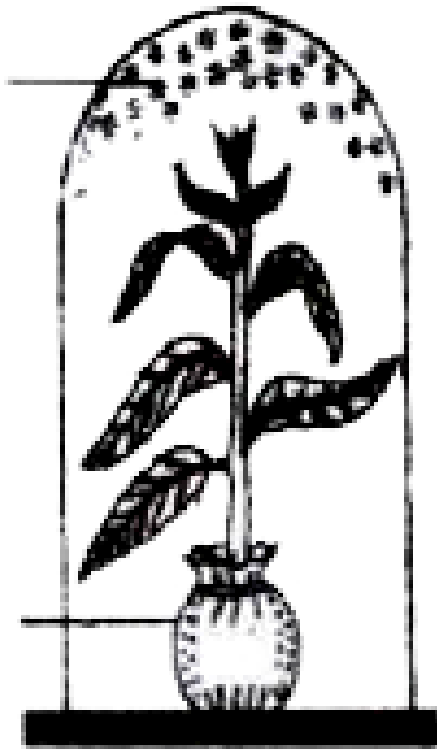


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19. Given below is an experimental set-up to study a particular process:

WATER

COVERED
POTTED

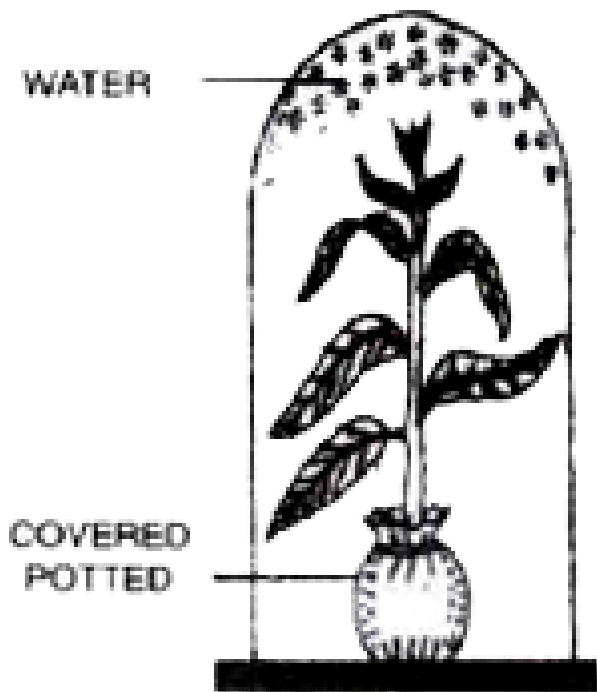


Why is the pot covered with a plastic sheet ?



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20. Given below is an experimental set-up to study a particular process:

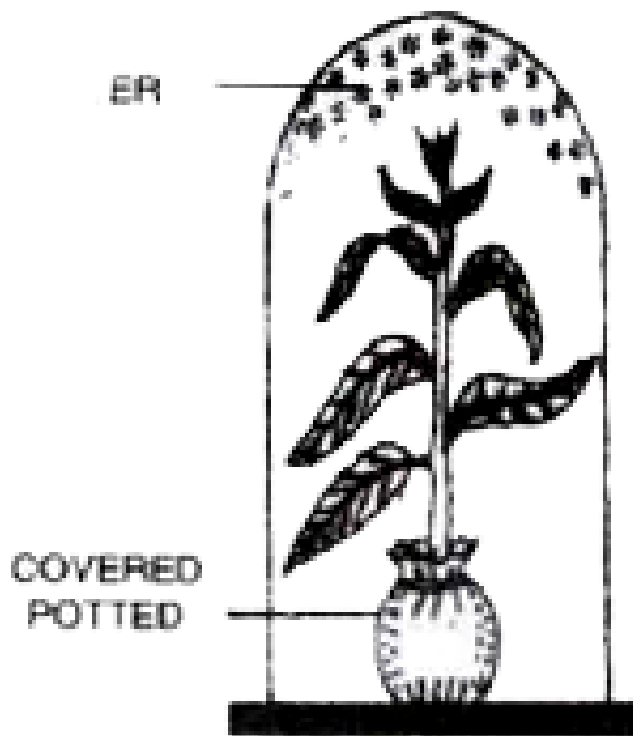


Suggest a suitable control for this experiment.



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21. Given below is an experimental set-up to study a particular process:

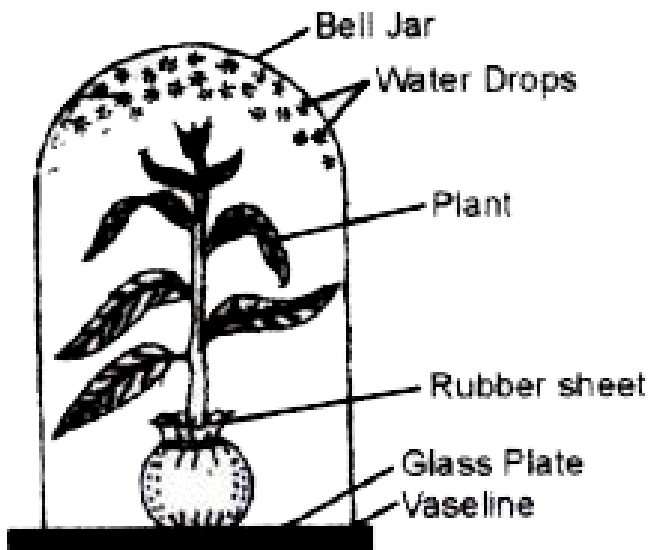


Mention one way in which this process is beneficial to the plant.



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22. Given below is an apparatus which was setup to investigate a physiological process in plants. The setup was placed in bright sunlight. Answer the questions that follow:



List two adaptations in plants to reduce the above process.



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23. Answer the following questions briefly.

List two reasons for the population explosion in India.



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24. Give two functions of the amniotic fluid.



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25. Tell the functions of ear ossicles.



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26. List any two activities of WHO.



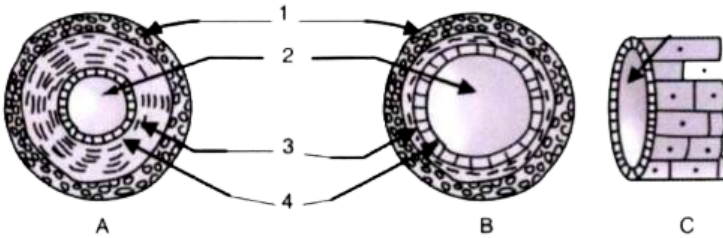
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27. State Mendel's Law of Dominance.



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28. The figures given below are cross-sections of blood vessels

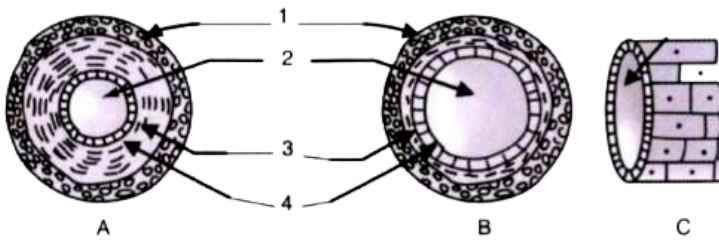


Identify the blood vessels A B and C.



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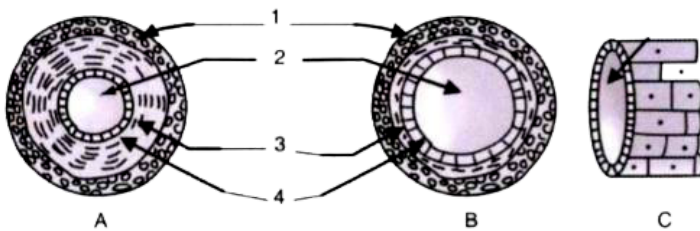
29. The figures given below are cross-sections of blood vessels



Name the parts labelled 1 – 4.

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30. The figures given below are cross-sections of blood vessels

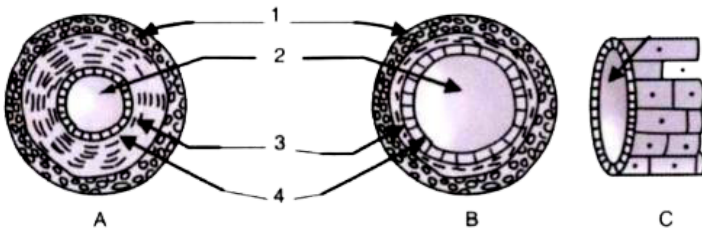


Name the type of blood that flows (a) through

A. (B) through b

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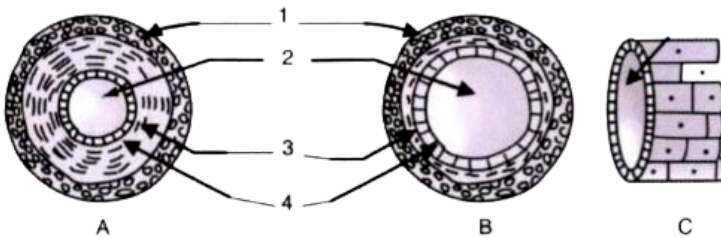
31. The figures given below are cross-sections of blood vessels



Write two structural differences between A and B

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32. The figures given below are cross-sections of blood vessels



In which of the above vessels referred in the above diagram exchange of gases actually take place?

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33. Differentiate between the following:

Diffusion and osmosis



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

RBC and WBC (Shape)



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

vasectomy and Tubectomy (Explain)



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36. Differentiate between the following:

Vasopressin and Insulin (Deficiency disorder)



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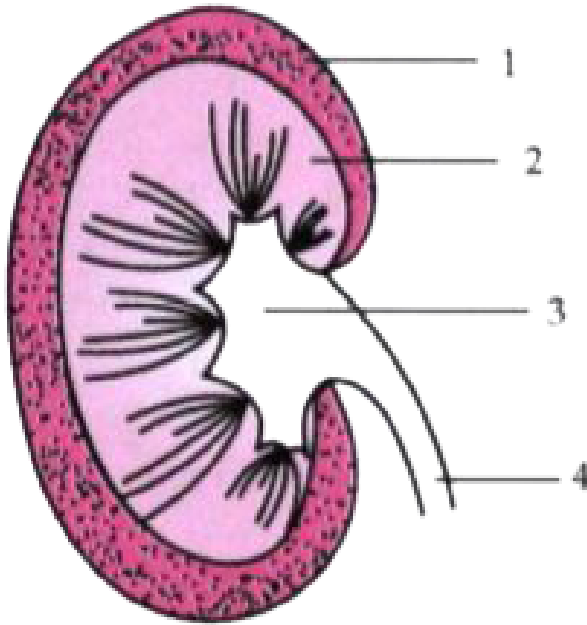
37. Give one difference between the following pairs on the basis of what is given in brackets :

Rods and Cones (Pigment present)



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38. The diagram given below shows a section of a human kidney. Study the diagram carefully and answer the questions that follow :



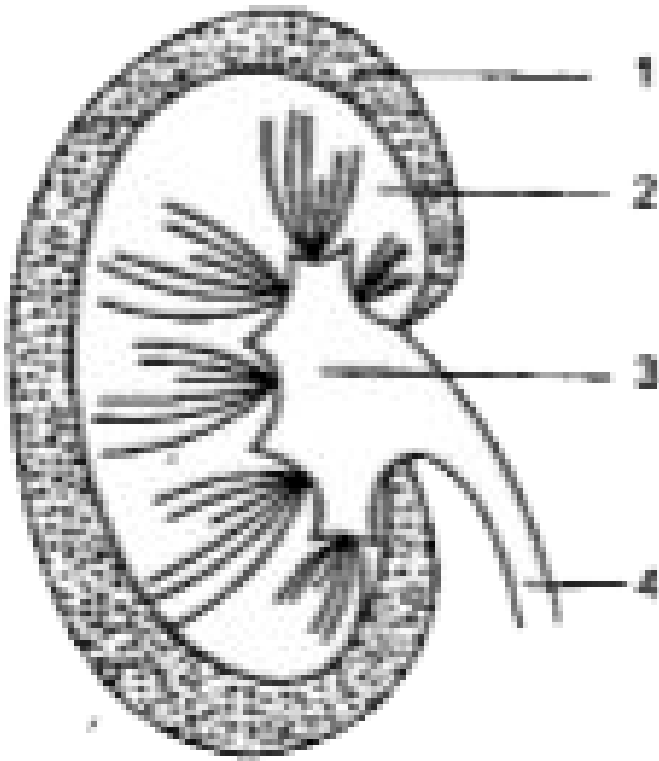
Label the parts numbered 1 to 4.



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39. The diagram given below shows a section of a human kidney. Study the diagram carefully

and answer the questions that follow:



(i) Label the parts numbered 1 to 4.

(ii) Why does part "2" have a striped appearance?

(iii) What is the fluid that passes down part: '4'
? Name the main nitrogenous waste present

in it.

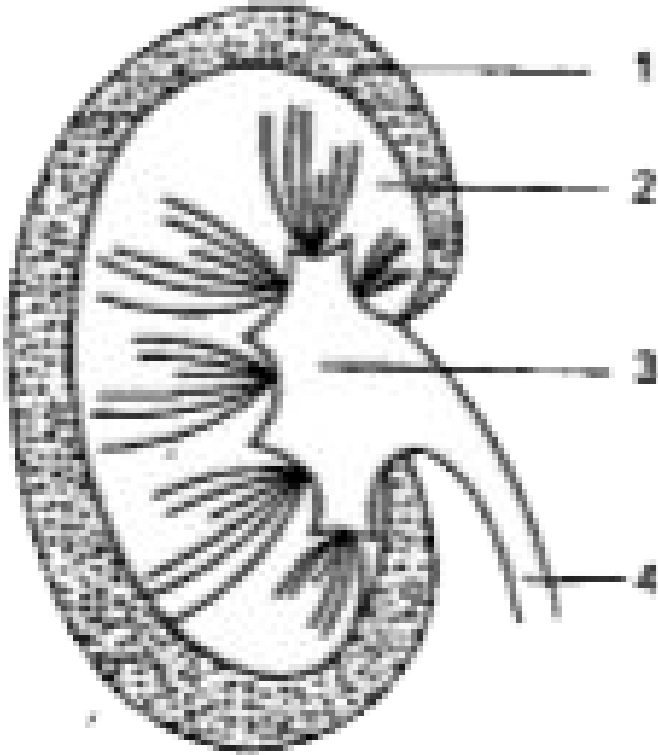
(iv) Mention the structural and functional unit of kidneys.

(v) Name the two major steps in the formation of the fluid mentioned



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40. The diagram given below shows a section of a human kidney. Study the diagram carefully and answer the questions that follow:



(i) Label the parts numbered 1 to 4.

(ii) Why does part "2" have a striped appearance?

(iii) What is the fluid that passes down part: '4'
? Name the main nitrogenous waste present
in it.

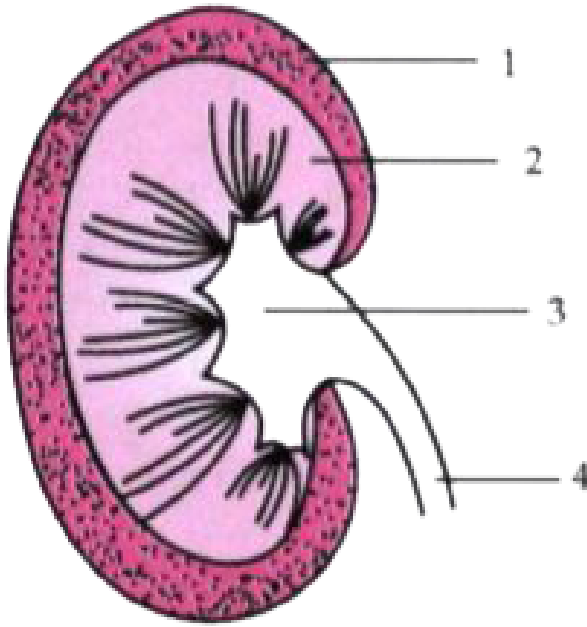
(iv) Mention the structural and functional unit of kidneys.

(v) Name the two major steps in the formation of the fluid mentioned



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41. Given below is a simple diagram of the human kidney cut open longitudinally. Answer the following questions :

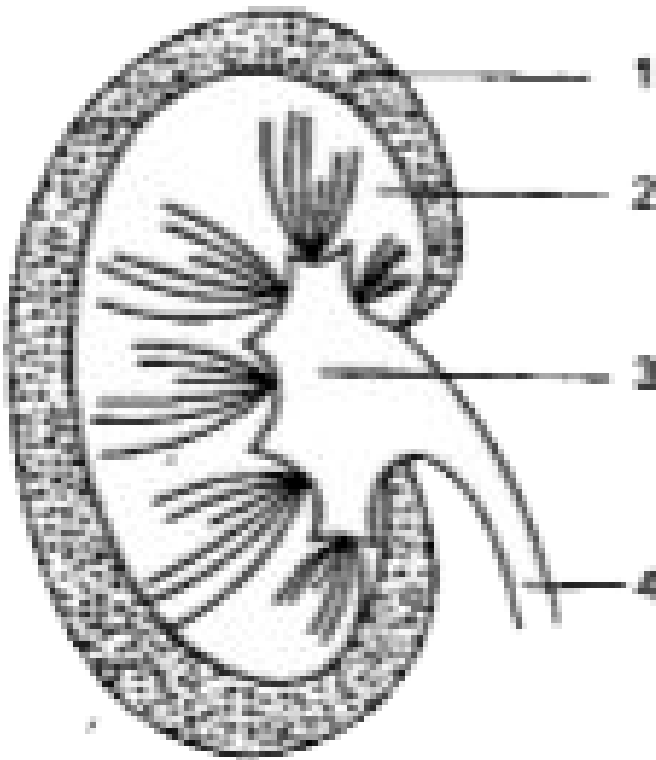


Name the structural and functional units of the kidney.



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42. The diagram given below shows a section of a human kidney. Study the diagram carefully and answer the questions that follow:



(i) Label the parts numbered 1 to 4.

(ii) Why does part "2" have a striped

appearance?

(iii) What is the fluid that passes down part: '4' ? Name the main nitrogenous waste present in it.

(iv) Mention the structural and functional unit of kidneys.

(v) Name the two major steps in the formation of the fluid mentioned



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43. Draw neat and labelled diagrams of the Malpighian Capsule.



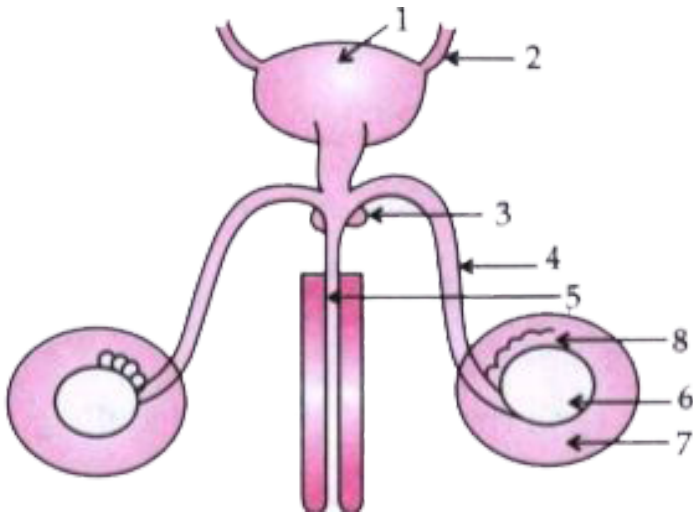
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44. Draw neat and labelled diagrams of the A Myelinated Neuron.



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45. The diagram given below shows the male urinogenital system of a human being. Study the diagram and answer the questions that follow :

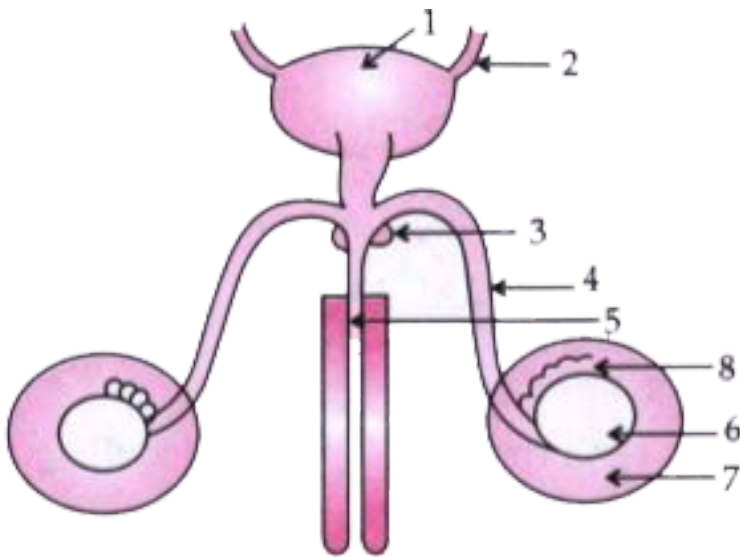


Label the parts numbered 1 to 8.



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46. The diagram given below shows the male urinogenital system of a human being. Study the diagram and answer the questions that follow :

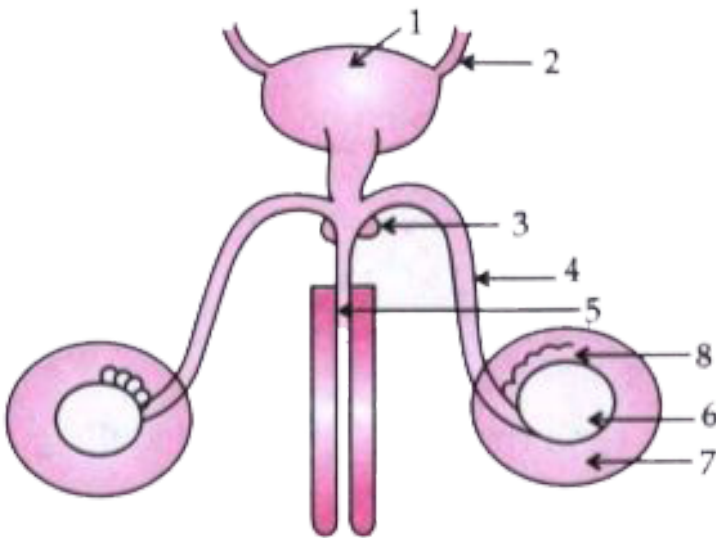


Name the corresponding structure of part (4) in female reproductive system.



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47. The diagram given below shows the male urinogenital system of a human being. Study the diagram and answer the questions that follow :



What is the role of part 7 ?

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48. In a homozygous plant round seeds (R) are dominant over wrinkled seeds (r):

Draw a Punnett square to show the gametes and offspring when both the plants have heterozygous round seeds (Rr).



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49. In a homozygous plant round seeds (R) are dominant over wrinkled seeds (r):

Mention the Phenotype and Genotype ratios of the offspring in F_2 generation.



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50. In a homozygous plant round seeds (R) are dominant over wrinkled seeds (r):

Name the sex chromosomes in human males and females.



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51. In a homozygous plant round seeds (R) are dominant over wrinkled seeds (r):

Briefly explain the term 'Mutation'.



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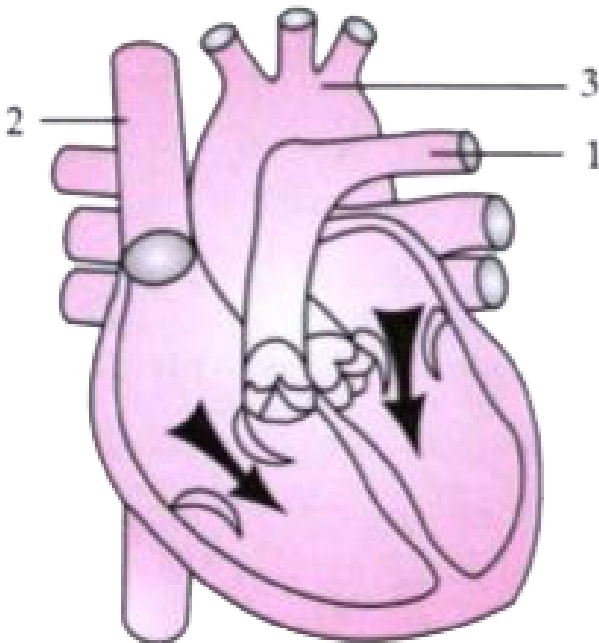
52. In a homozygous plant round seeds (R) are dominant over wrinkled seeds (r):

What is the number of chromosomes in the gametes of human beings?



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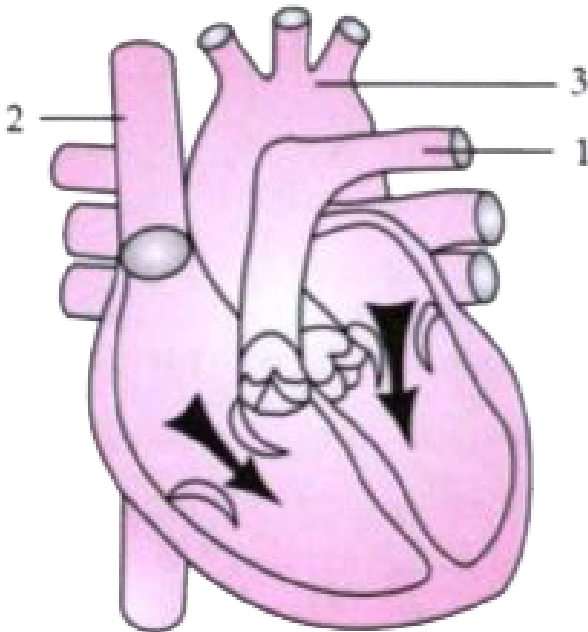
53. The diagram given below represents the human heart in one phase of its functional activities. Study the same and answer the questions that follow :



Name the phase.



54. The diagram given below represents the human heart in one phase of its functional activities. Study the same and answer the questions that follow :

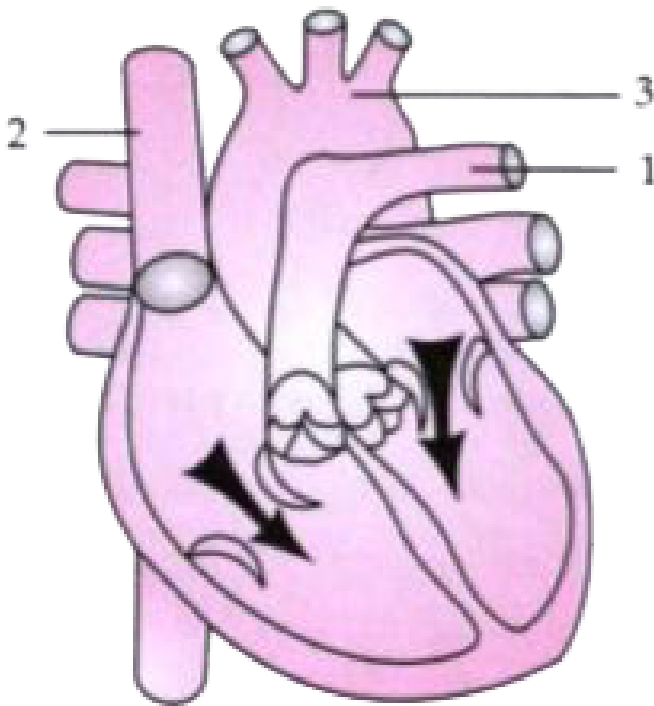


Which part of the heart is contracting in this phase ? Give a reason to support your answer



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55. The diagram given below represents the human heart in one phase of its functional activities. Study the same and answer the questions that follow :



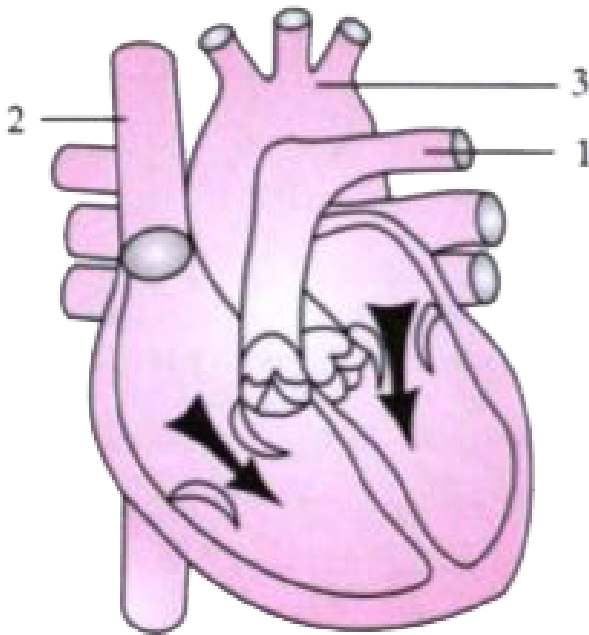
Label the parts 1, 2 and 3.



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56. The diagram given below represents the human heart in one phase of its functional

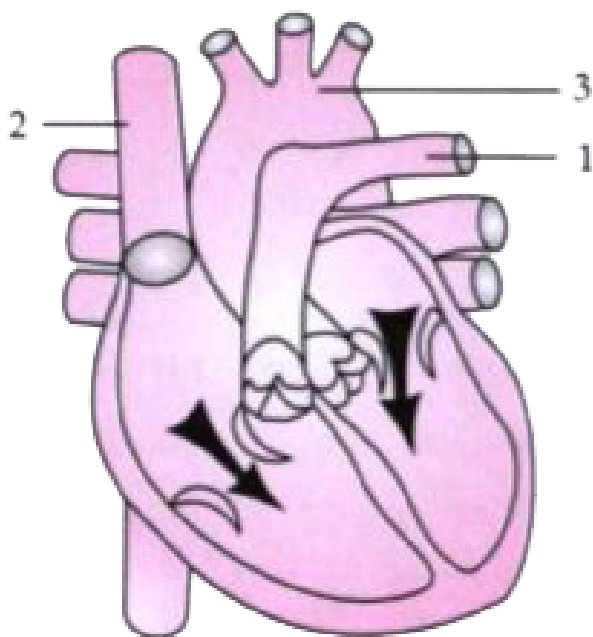
activities. Study the same and answer the questions that follow :



Which part of the heart is contracting in this phase ? Give a reason to support your answer

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57. The diagram given below represents the human heart in one phase of its functional activities. Study the same and answer the questions that follow :

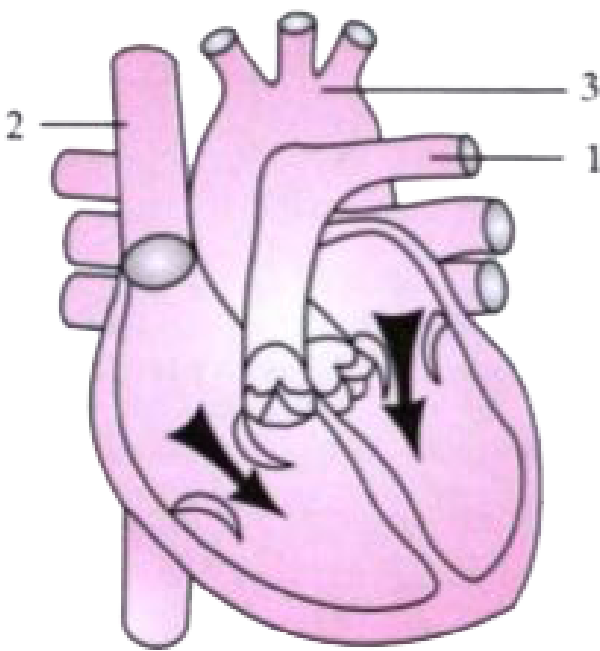


Which part of the heart is contracting in this phase ? Give a reason to support your answer



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58. The diagram given below represents the human heart in one phase of its functional activities. Study the same and answer the questions that follow :



Name the phase.



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59. Explain how does green house effect cause global warming ?



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60. The pressure exerted by the cell wall to balance the turgor pressure is called pressure.



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61. Describe in brief : Selective reabsorption



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62. Explain the following terms:

(a) Environmental resistance

(b) Natality rate

(c) Exponential phase



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63. Explain briefly :

Pulse.



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