doubtnut
India's Number 1 Education App

BIOLOGY

BOOKS - VGS BRILLIANT BIOLOGY (TELUGU ENGLISH)

RESPIRATION - THE ENERGY PRODUCING SYSTEM

Improve Your Learning Conceptual Understanding

1. Distinguish between Inspiration and Expiration

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2. Distinguish between Aerobic and Anaerobic respiration

Watch Video Solution

3. Respiration is energy producing process in the organisms . It takes place both in the presence and absence of oxygen. Laxmi said there are some differences between the two processes . How do you support her ?

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4. Distinguish between Respiration and Combustion

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5. Even though both are oxidation processes, combustion and respiration are different in many aspects. Explain those differences .

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6. Distinguish between Respiration and Combustion

Watch Video Solution

7. Distinguish between Photosynthesis and Respiration

Watch Video Solution

8. Difference between food preparation process - energy releasing process.

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9. Distinguish between Photosynthesis and Respiration

Watch Video Solution

10. State two similarities between aerobic and anaerobic respiration.

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11. State two similarities between aerobic and anaerobic respiration.

Watch Video Solution

12. Food sometimes enters the wind pipe and causes choking. How does it happen ?

Watch Video Solution

13. Food sometimes enters the wind pipe and causes choking. How does it happen ?

Watch Video Solution

14. Why does the rate of breathing increase while walking uphill at a normal pace in the mountains ? Give two reasons.

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15. "Air leaves the tiny sacs in the lungs to pass into capillaries." What modification is needed in the statement ?

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16. All plants give out oxygen during day carbon dioxide during night . Do you agree with this statement ? Give reason

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17. Why does a deep sea diver carry oxygen cylinder on his/her back?

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18. How are alveoli designed to maximise the exchange of gases ?

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19. Where will the release of energy from the glucose in respiration take place ' ? Mala writes lungs , while Jiya writes muscles . Who is correct and why?

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20. What is the role of epiglottis and diaphragm in respiration ?

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21. How does gaseous exchange take place at blood level ?

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22. Explain the mechanism of gaseous exchange at bronchiole level.

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23. After undergoing strenuous exercise we feel pain in muscles, does adequate oxygen reach the muscles ?

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24. Priyadarshini while playing Kho-Kho, she got muscle pain. What might be the reasons for it ?

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25. Raju said , " Stems also respire along with leaves in plants ". Can you support this statement ? Give your reasons

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Improve Your Learning Asking Question And Making Hypothesis

1. What will happen, if there is no diaphragm in the human body?

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2. if you have a chance to meet pulmonologist , what questions are you going to ask about pulmonary respiration ?

Watch Video Solution

3. if you have a chance to meet pulmonologist , what questions are you going to ask about pulmonary respiration ?

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Improve Your Learning Experimentation And Field Investigation

1. What procedure do you follow to understand anaerobic respiration in your

school laboratory ?

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2. What procedure do you follow to understand anaerobic respiration in your school laboratory ?

Watch Video Solution

3. How do yeast cells convert glucose solution to CO_2 and ethyl alcohol ?

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4. What are your observations in combustion of sugar activity ?

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Improve Your Learning Information Skills And Projects

1. Collect information about cutaneous respiration in frog. Prepare a note and explain them in your classroom.

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2. How does frog respire with the help of skin

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3. Collect information about respiratory diseases (because of pollution, tobacco) and discuss with your classmates.

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Improve Your Learning Communication Through Drawing Model Making

1. What is the pathway of air from nostril to alveolus ?

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2. Draw a block diagram showing events in respiration . Write what you understood about cellular respiration :

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Improve Your Learning Appreciation And Aesthetic Sense Values

1. How do you appreciate the mechanism of respiration in our body ?

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Improve Your Learning Application To Daily Life Concern To Biodiversity

1. Prepare an article on anaerobic respiration to present school symposium

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2. Prepare a cartoon on discussion between haemoglobin and chlorophyll about respiration.

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Question Given In The Lesson 1 Mark Questions

1. What gas was produced by combustion according to Lavoisier ?

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2. What didi Lavoisier find out about air from the experiments ?

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3. What conclusion can be drawn from Lavoisier's experiments ?

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4. Which gas do you think is Lavoisier talking about when he says chalky acid gas ?

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5. Which gas according to Lavoisier is respirable air ?

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6. It is a common observation that our breath is warmer than the air around us , does respiration have anything to do with this ?

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7. What does this experiment indicate ?

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8. Which gas turns lime water milky ?

Watch Video Solution

9. Which gas to do think might be present in greater quantities ?

Watch Video Solution

10. We are also aware of the fact that water vapour deposits on a mirror if we breathe out on it , where does this water vapour come from in Exhaled air ?

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11. Why are we advised not to talk while eating food ?

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12. What can be concluded from this?

Watch Video Solution

13. What happens during the process of breathing?

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14. Which gas needs to be removed from our body during exhalation? Where does the extra amount of gas come from ?

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15. What is the composition of inhaled air?

Watch Video Solution

16. When exhaled air is compared with inhaled air, is there any difference in composition ?

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17. Why does the amount of oxygen vary between exhaled and inhaled air ?

Watch Video Solution

18. What has raised the percentage of carbon dioxide in exhaled air?

Watch Video Solution

19. After undergoing strenuous exercise we feel pain in muscles, does adequate oxygen reach the muscles ?

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20. What is being formed in the muscles ?

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21. In which set does the colour change faster ? Why ?

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Question Given In The Lesson 2 Mark Questions

1. Can it be said that Priestly's experiment helped us to find out more about composition of air ? How ?

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2. What steps in the process of respiration does Lavoisier mention ?

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3. What is the role of diaphragm and ribs in respiration ? Are both active in man and woman?

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4. Do cells of alveoli or lungs also require oxygen to carry out cellular respiration ? Why / Why not ?

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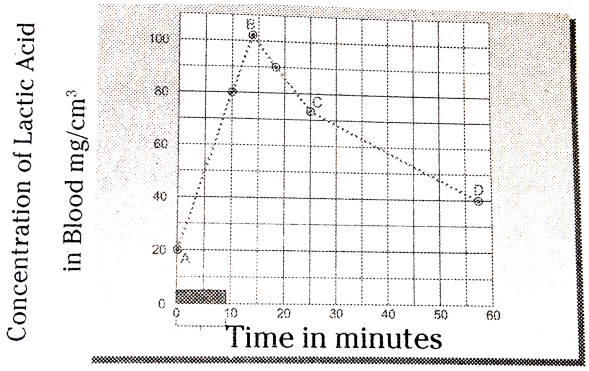
Question Given In The Lesson 4 Mark Questions

1. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What was the concentration of lactic acid in the blood to start with ?

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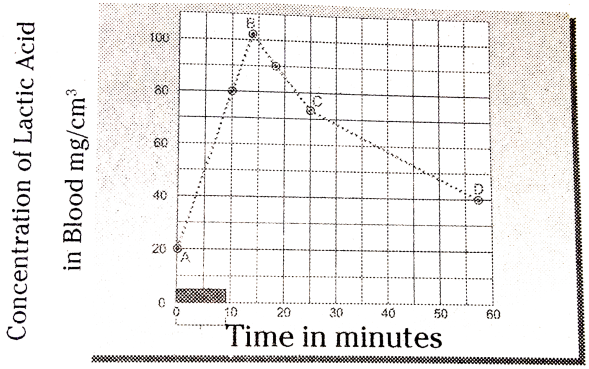
2. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What was the greatest concentration reached during the experiment ?

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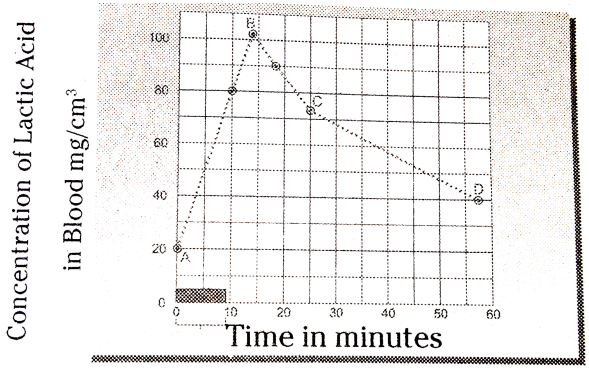
3. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What are the consequences of oxygen deficit ?

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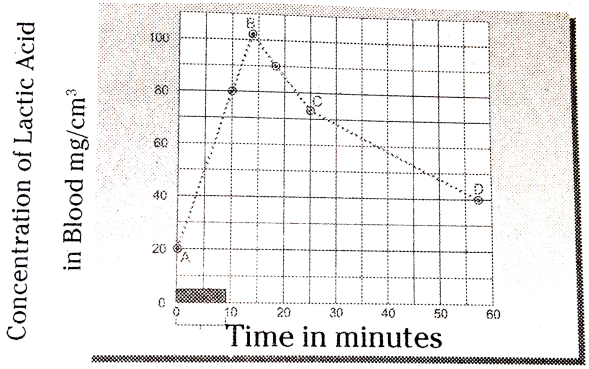
4. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What does high level of lactic acid indicate about the condition of respiration ?

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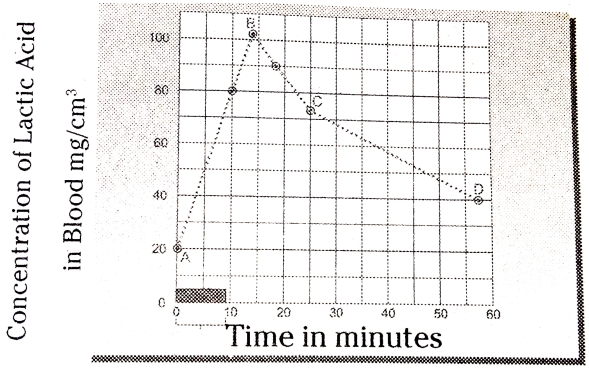
5. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What are the two aspects discussed through graph ?

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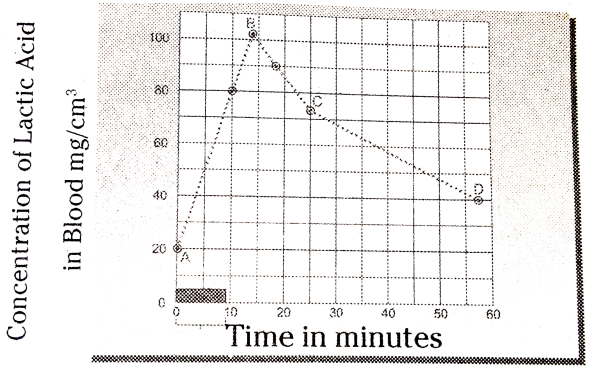
6. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

In which state lactic acid concentration is more ?

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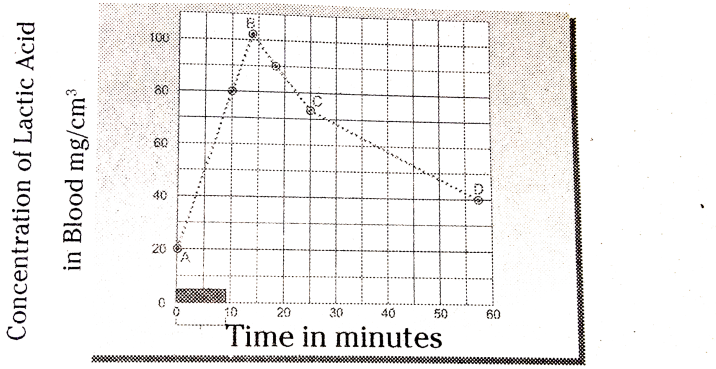
7. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

Why oxygen deficit in muscles of running Athlet ?

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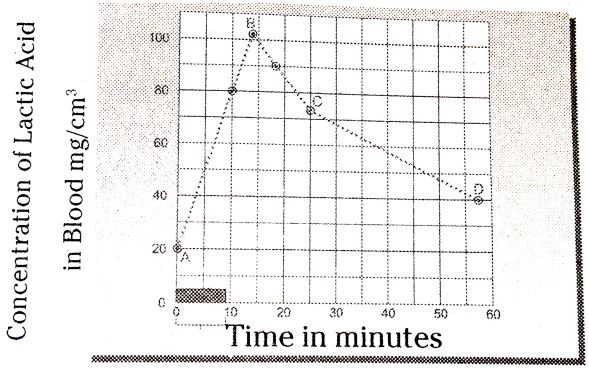
8. Observe the following graph and answer the questions given below .



Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What are the consequences of oxygen deficit ?

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Think Discuss

1. What will happen if the respiratory tract is not moist ?

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2. Are both lungs similar in size ?

Watch Video Solution

3. Why are alveoli so smell and uncountable in number ?

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Fill In The Blanks

1. Exhaled air contains ___ and ___

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2. A flap like muscular valve controls movement of air and food is _____

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3. Energy currency of the cell is called ____

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4. Lenticels are the respiratory organs that exist in ____ part of the plant.

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5. Mangrove trees respire with their _____

Watch Video Solution

Choose The Correct Answer

1. We will find vocal cords in

A. Larynx

B. Pharynx

C. Nasal cavity

D. Trachea

Answer: a

Watch Video Solution

2. Cluster of air sacs in lungs are called

A. Alveoli

B. Bronchi

C. Bronchioles

D. Air spaces

Answer: a

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3. Which of the following is correct ?

(i)The diaphragm contracts - volume of chest cavity increased

(ii)The diaphragm contracts - volume of chest cavity decreased

(iii)The diaphragm expands - volume of chest cavity Increased

(iv)The diaphragm expands - volume of chest cavity decreased

A. i

B. I and ii

C. ii and iii

D. iv

Answer: a

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4. Respiration is a catabolic process because of

A. Breakdown of complex food molecules

B. Conversion of light energy

C. Synthesis of chemical energy

D. Energy storage

Answer: a

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5. Energy is stored in

A. Nucleus

B. Mitochondria

C. Ribosomes

D. Cell wall

Answer: b

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Creative Questions For New Model Paper 1 2 Mark Questions

1. What does this experiment indicate ?

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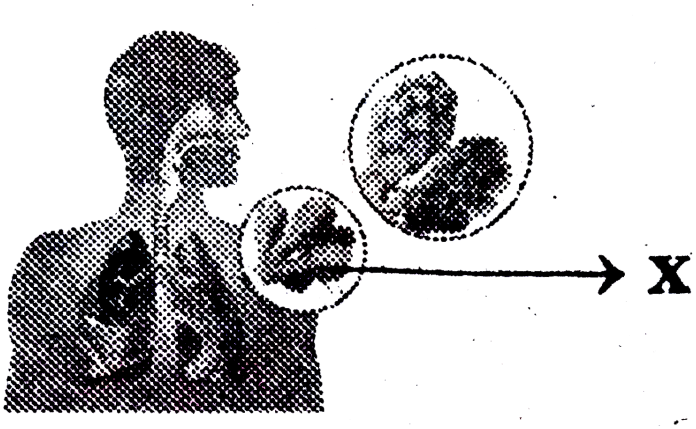
2. 

Name the labelled part 'x' in the above figure.

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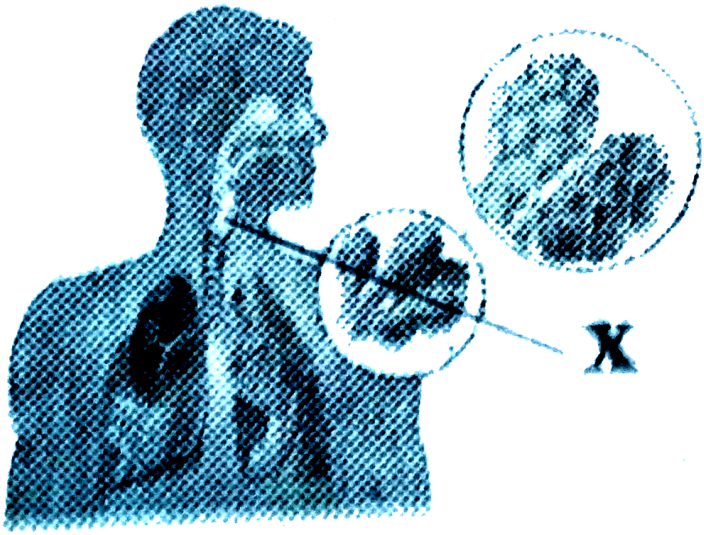
3. 

What is the function of labelled part 'x' in the above figure ?

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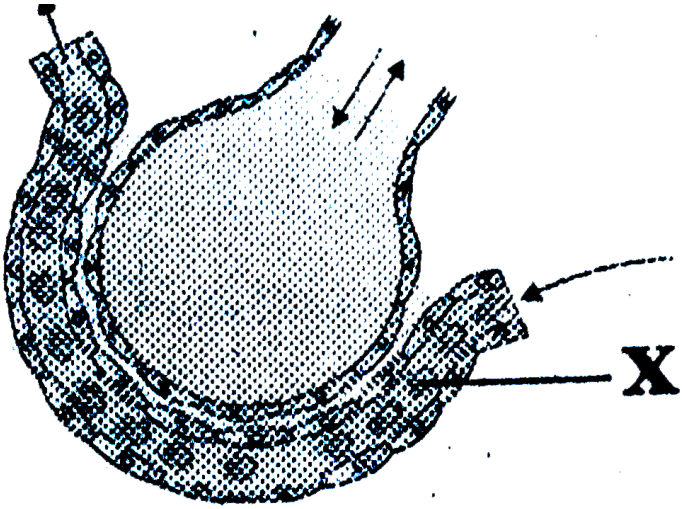
4. 

The labelled part 'x' in the above figure denotes.

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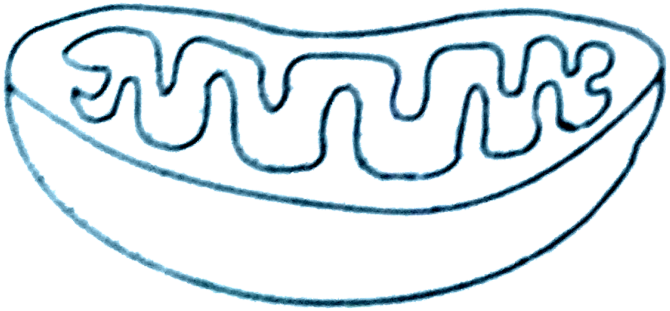

5.

The above shown figure , with which it is associated ?

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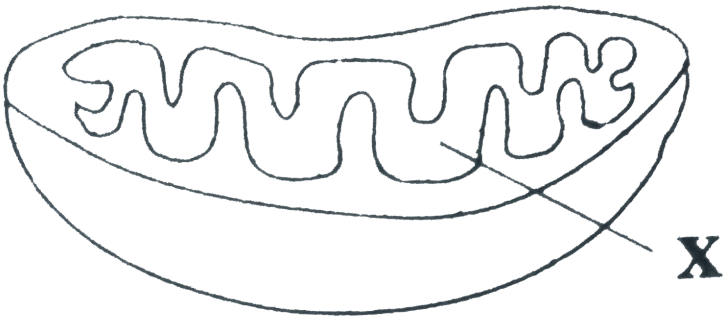

6.

Name the labelled part 'x' in the above figure.

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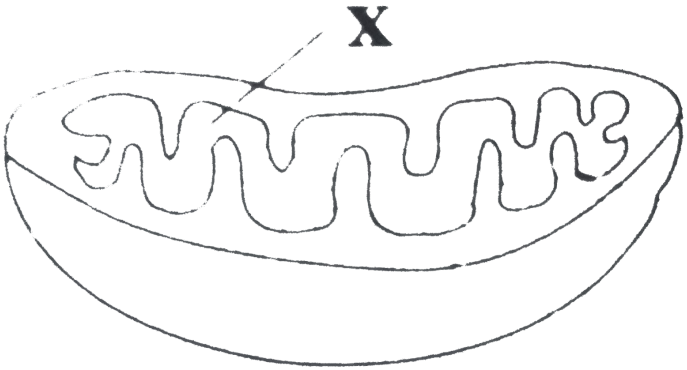

7.

Name the labelled part 'x' in the above figure.

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8. 

Why did this athlete get muscle cramps after his running race ?

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9. 

What is the aim of this experiment ?

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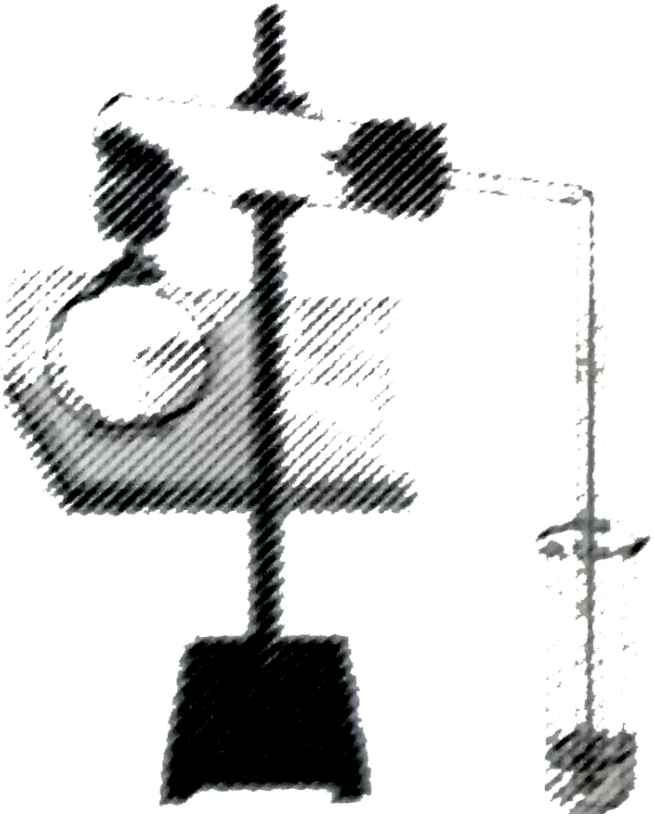
10. 

What do you prove from this experiment ?

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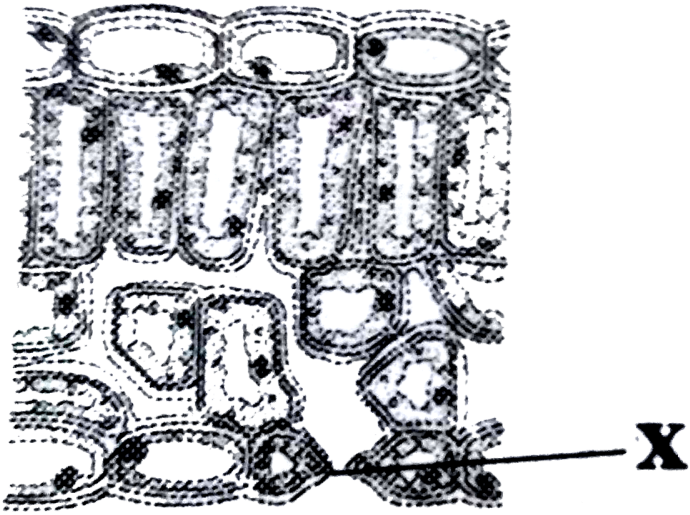
11. 

Wha is the function of the labelled part 'x' in the above figure ?

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12. 

Identify these respiratory structures on woody stems

Watch Video Solution

13. 

In which plants can you observe these structures ?

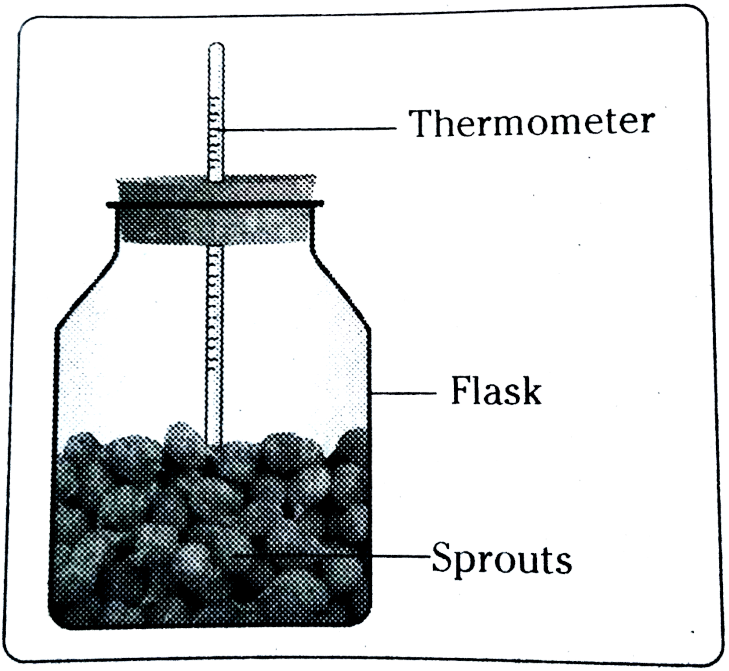
Watch Video Solution

14. 

Which gas in this experiment turns the lime water milky ?

Watch Video Solution

15. In your opinion , where did this heat come from ?



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16. Identify the mismatched pairs.

(1)Frog -Skin

(2)Cockroach -Diffusion

(3)Amoeba - Trachea

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17. Identify the mismatched pairs .

(1)Respiratory roots - Mangrove plants

(2)Hallow stems - Hydrophytes

(3)Storage roots - Xerophytes

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18. Identify the mismatched pair.

(1)ATP-Energy currency

(2)Mitochondria - Power house of the cell

(3)Lactic acid -Ethanol.

Watch Video Solution

19. Identify the mismatched pair

(1)Fish-Gills

(2)Grasshopper - Skin

(3)Whale - Lungs

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20. I am a red coloured pigment present in the blood . I help in the transportation of gases . Who am I ?

Watch Video Solution

21. I can undergo anaerobically and can convert glucose into ethanol. Who am I ?

Watch Video Solution

22. I occur when 'oxygen debt ' arises in muscles . I cause muscle cramps. Who am I ?

Watch Video Solution

23. I am a flap like structure , arresting the entry of food into respiratory tract. Who am I ?

Watch Video Solution

24. Complete the following blanks .

_____ (1) play a major role in coagulation of blood ___ (2) helps in transportation of respiratory gases .

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25. Complete the following blanks

____(1) is the site of cellular respiration. It is also known as ____ (2)

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26. In marshy areas we can observe ____ (1) roots in the plants. These roots have ____ (2) which connect the stems with roots, making diffusion from the upper part much more effectively .

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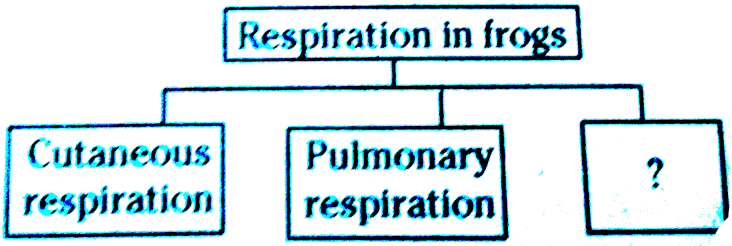
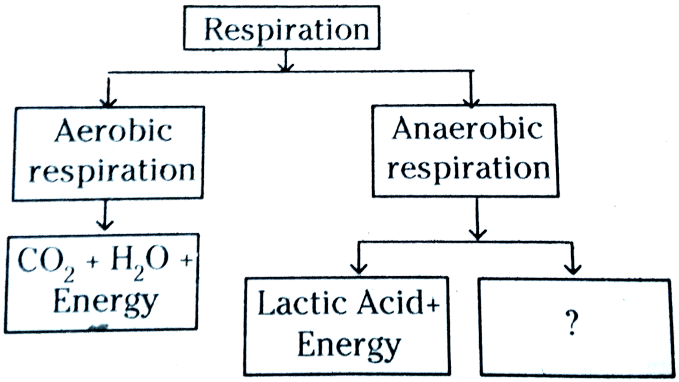
27. Observe the flow chart and complete the blanks .



Watch Video Solution

28. Observe the flow chart and complete the blanks .



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29. Identify the scientist

He conducted many experiments on the properties of gases . He identified CO_2 and he called it as fixed gas.

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30. Identify the scientist

He was a renowned chemist. He wrote a textbook of "Human physiology " in the mid - 19th century .

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31. I am the structural and functional unit of lung. Who am I ?

Watch Video Solution

32. Expand A. T.P.

Watch Video Solution

33. Identify the scientist

He stated that respiration is a type of combustion and combustion is the source of heat in animals .

Watch Video Solution

34. Identify the scientist .

He wrote in a compilation in 1783, "respiration is a combustion process. It is a very slow process and here oxygen is not only combines with carbon but also with hydrogen ."

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35. Read the sentence, find the error and rewrite it.

$Hb + O_2 \rightarrow HbO_2$ (in tissues)

$HbO_2 \rightarrow Hb + O_2$ (in lungs)

Watch Video Solution

36. Read the sentence, find the error and rewrite it.

In prokaryotes, cellular respiration occurs in matrix.

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37. Read the sentence, find the error and rewrite it.

During cellular respiration the energy is produced . It is stored as ATP in the form of carbon bonds.

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38. Read the sentence, find the error and rewrite it.

At a height of 13 km , the concentration of oxygen is much lower about 1/6th at sea level.

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39. If oxygen is not utilised, pyruvic acid is converted in to either ___ (1) or ___ (2) and very little amount of energy is liberated.

Watch Video Solution

40. Read the sentence, find the error and rewrite it.

Diaphragm plays an important role in the respiratory movements in women

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41. Which of the following group constitute the right pathway of gases in the respiratory system ?

A. Nostrils $\rightarrow$ Nasal cavity $\rightarrow$ Larynx $\rightarrow$

Pharynx → Bronchus → Trachea → Bronchioles → Alveolus → Blood

B.Nostrils → Nasal cavity → Pharynx → Larynx → Trachea → Bronchus → Bronchioles → Alveolus → Blood

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42. Which of the following group represent the correct sequence of steps in respiration

A.Breathing → Gaseous exchange at lungs → Gaseous exchange at tissue level → Gas

transport by blood → Cellular respiration .

B. Breathing → Gaseous exchange at lungs → Gas transport by blood → Gaseous exchange at tissue level → Cellular respiration .

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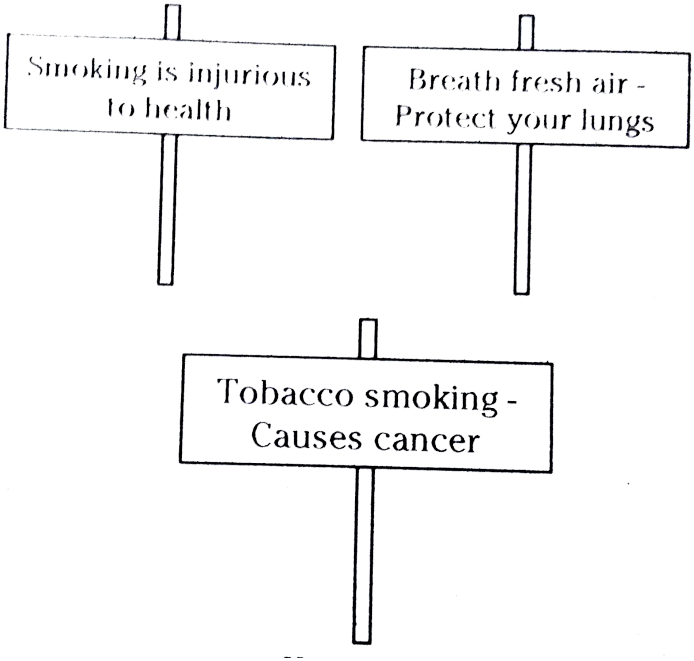
43. Observe the following placards . In which occasion do you use them ?



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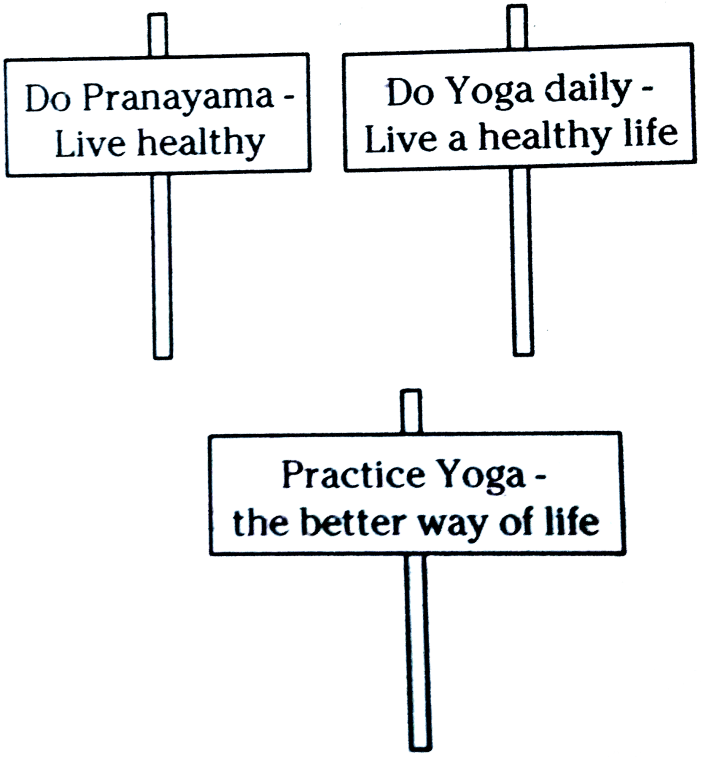

44.

Observe the following placards . On which occasion do you use them in your school ?

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45. Man : Lungs , Fish : ?

Watch Video Solution

46. Lenticels : Hard woody stems , Respiratory roots : ?

Watch Video Solution

47. Males : Diaphragm , Females : ?

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48. Brain : Meninges , Lungs : ?

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49. Sites of photosynthesis : Chloroplasts , Sites of cellular respiration : ?

Watch Video Solution

50. ATP : Energy Currency , Mitochondria : ?

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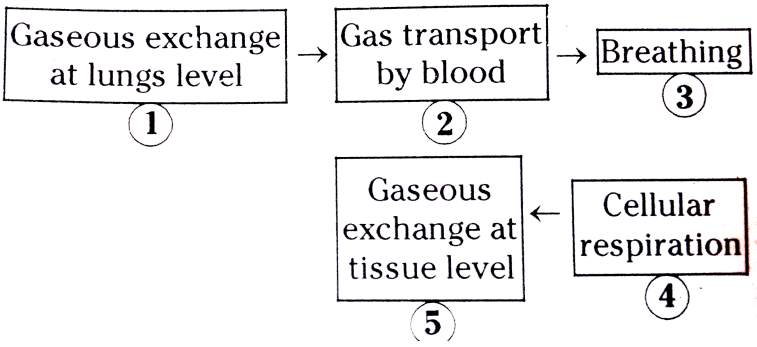
51. Arrange the flow chart in correct order.



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52. I am the site of cellular respiration . I also known as "the power house of the cell " . Who

am I ?

Watch Video Solution

53. I am known as "energy currency " Who am I ?

Watch Video Solution

54. I am a process through which alcohol, dough are prepared . I occur in the absence of oxygen . Who am I ?

Watch Video Solution

55. I am an indicator . I am used to detect the presence of oxygen . Who am I ?

Watch Video Solution

56. I am the mode of respiration in unicellular , Hydra and planarians . Who am I ?

Watch Video Solution

57. I am a type of respiratory system present in most of the arthropods like grasshopper and cockroach . Who am I ?

Watch Video Solution

58. I am a mode of respiration. I am present in aquatic animals like fishes . Who am I ?

Watch Video Solution

59. I am present in leaf . I am very useful in gaseous exchange . Who am I ?

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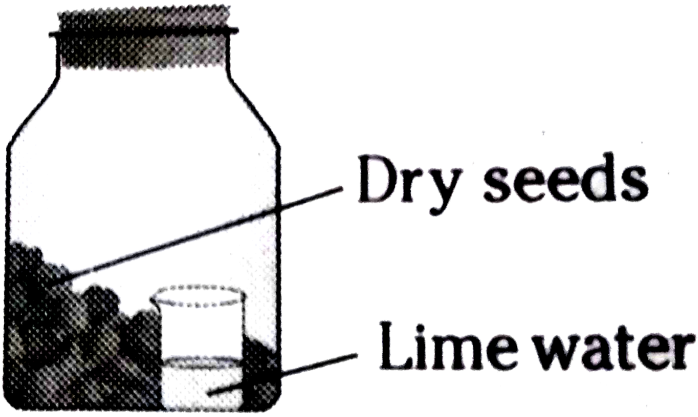
60. Complete the blanks .

_____(1) stems are present in aquatic plants ._____ (2) are present to reduce their weight on water.

Watch Video Solution

61. 

Observe the above experimental setup. The student had committed a mistake in arranging the apparatus. What was it ?

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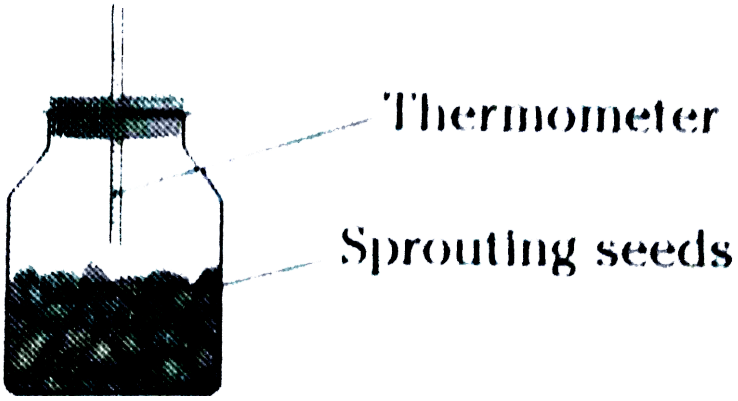
62. 

Identify the mistake in the experimental setup.

Watch Video Solution

63. I am the respiratory substrate. I am oxidised during respiration. Who am I ?

Watch Video Solution

64. I am the structural and functional unit of lung. Who am I ?

Watch Video Solution

65. I am a respiratory gas. I can turn the lime water milky. Who am I ?

Watch Video Solution

66. I can perform three types of respiration.

I can perform respiration through skin, lungs and bucco - pharyngeal cavity . Who am I ?

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67. Where do we observe aerial roots ?

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68. Vamsi conducted the experiment shown in the diagram. The temperature in thermometer rises. What is the aim of this experiment ?

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69. Which of the following are essential to conduct the experiment to prove that heat is liberated during respiration ?

(i)Flask , (ii)Thermometer , (iii) Cork , (iv)Sprouting seeds , (v)Lime water , (vi)Dry seeds.

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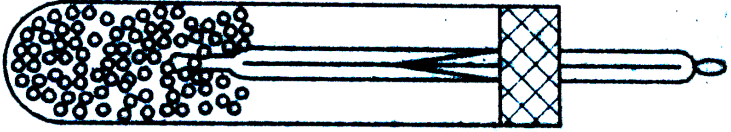
70. The following alternative apparatus arrangement is to prove ____



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71. Identify the scientist. " Respiration was a process like combustion"

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72. What is the role of Janus Green -B indicator in anaerobic experiment with yeast ?

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73.

Identify the given figure.

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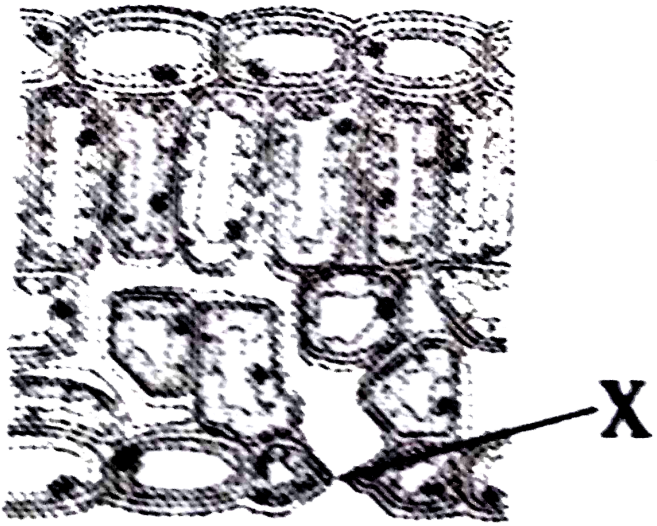
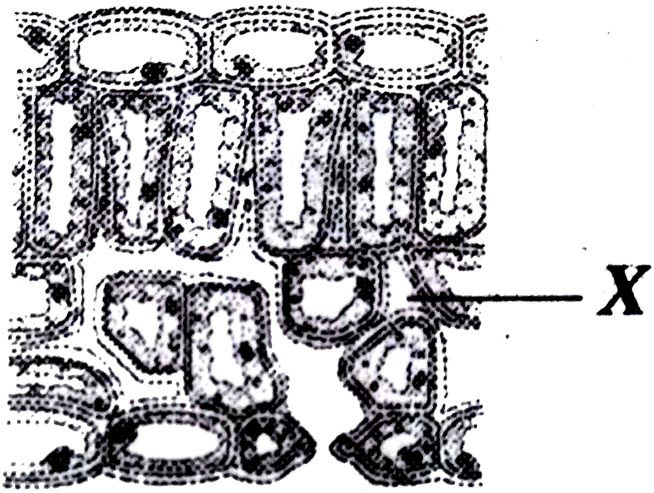


74.

Identify 'X'

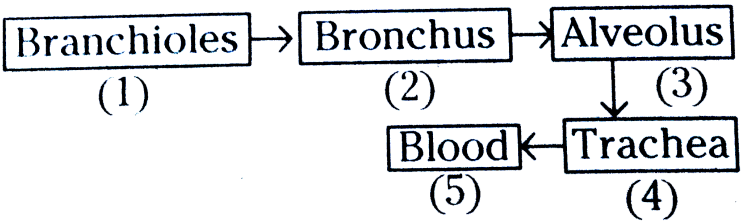
Watch Video Solution

75. 

In the figure, X denotes.

Watch Video Solution

76. Arrange the following flow chart in the correct order .



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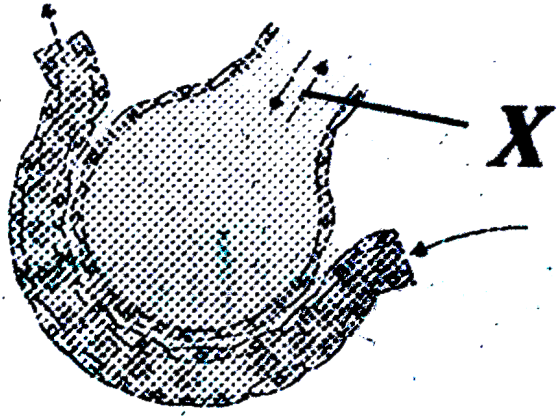
77. In this figure , x denotes the following



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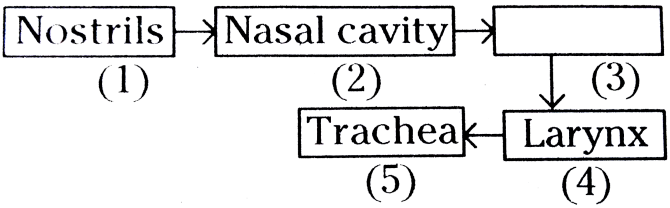
78. Man : Lungs , Frog : _____

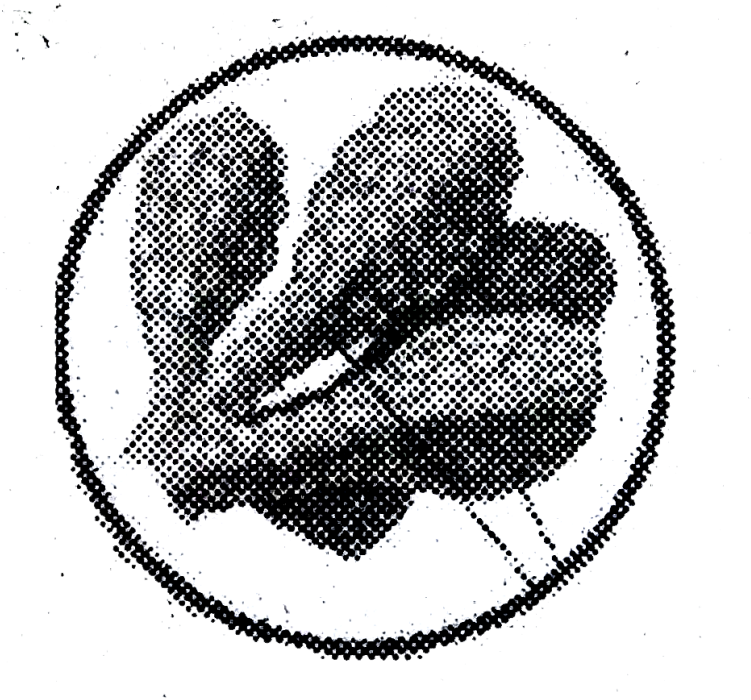
Watch Video Solution

79. Complete this flow chart .



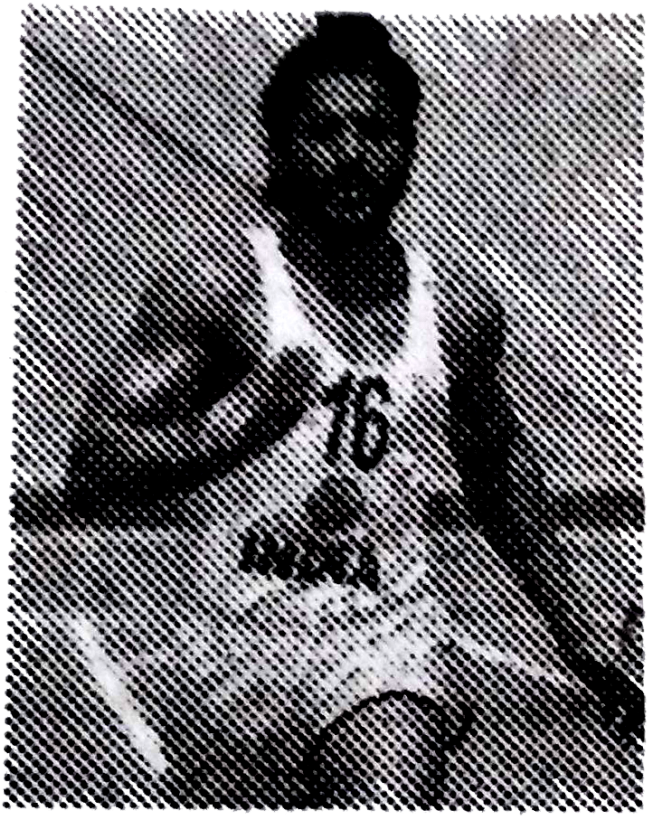
Watch Video Solution

80. The bunch of grapes like structures are seen in ___



Watch Video Solution

81. During the race , this athlete got severe muscular pain and fell down . Can you guess the reason for that ?



Watch Video Solution

Creative Questions For New Model Paper Preparation Questions For The Examination Purpose

1. Which gases are exchanged in your lungs ?

Watch Video Solution

2. What are the components present in exhaled air ?

Watch Video Solution

3. We can use lime water to test the presence of CO_2 in respiration experiments. What change do you observe in lime water ?

Watch Video Solution

4. What is the chemical used to identify the presence of oxygen is anaerobic respiration experiment ?

Watch Video Solution

5. What is the energy currency of the cell ?

Watch Video Solution

6. What is the total lung capacity of human being ?

Watch Video Solution

7. If green plants are not there on earth what happens ?

Watch Video Solution

8. What is the percentage of CO_2 in exhaled air ?

Watch Video Solution

9. What are the structural and functional units of the lungs ?

Watch Video Solution

10. if the quantity of particular matter increases in air , what will happen ?

Watch Video Solution

11. What is the middle step between gaseous exchange at lungs level and tissue level ?

Watch Video Solution

12. What happens if there is no epiglottis in human beings ?

Watch Video Solution

13. Where do you find vocal cords ?

Watch Video Solution

14. In which process food is broken down for release of energy ?

Watch Video Solution

15. From which language the word respiration came ?

Watch Video Solution

16. Which gas is liberated on heating powdered charcoal ?

Watch Video Solution

17. What gas is needed for combustion of substances ?

Watch Video Solution

18. Where does gaseous exchange take place in lungs ?

Watch Video Solution

19. In which part of the respiratory systems the air is filtered ?

Watch Video Solution

20. Name the muscular valve in the pharynx controls movement of air and food towards their respective passages .

Watch Video Solution

21. From where do the single celled organisms get oxygen ?

Watch Video Solution

22. What is the life span of RBC ?

Watch Video Solution

23. What is the percentage of oxygen in the exhaled air ?

Watch Video Solution

24. Name the oxygen carrying pigment in blood

Watch Video Solution

25. In bacteria, where does the cellular respiration take place ?

Watch Video Solution

26. How many calories of energy is obtained from 1 ATP molecule ?

27. Name the first stage in the oxidation of glucose molecule.

28. what is reason for mascular pains after strenuous exercises ?

Watch Video Solution

29. Name the process involved in the preparation of bread and alcohol

Watch Video Solution

30. In plants gaseous exchange occurs through ?

Watch Video Solution

31. Where can you observe respiratory roots ?

Watch Video Solution

32. What are the end products of aerobic respiration ?

Watch Video Solution

33. Name the structure that plays important role in respiratory movements.

Watch Video Solution

34. Where you can observe lenticels ?

Watch Video Solution

35. What is the function of lenticels ?

Watch Video Solution

36. The lungs are surrounded by two protective layers. What do you call them ?

Watch Video Solution

37. Name the metal present in haemoglobin

Watch Video Solution

38. What is the unstable compound formed , when oxygen combines with haemoglobin.

Watch Video Solution

39. What is the compound formed , when CO_2 is combined with haemoglobin ?

Watch Video Solution

40. What is the site of respiration in eukaryotic cells ?

Watch Video Solution

41. What is "the power house of the cell " ?

Watch Video Solution

42. In glycolysis , the glucose is converted into which form ?

Watch Video Solution

43. Name the microorganism associated with fermentation process.

Watch Video Solution

44. The blue dye Diazine green turns to which colour when the supply of oxygen around it is short ?

Watch Video Solution

45. Which gas is released when a baker prepares a dough by mixing yeast in it ?

Watch Video Solution

46. When we preserve idly , dosa dough at our home, we will notice the smell of alcohol. Can you guess the reason for it ?

Watch Video Solution

47. What are the end products of fermentation ?

Watch Video Solution

48. By which process ethanol can be separated from yeast glucose mixture ?

Watch Video Solution

49. What is the boiling temperature of ethanol ?

Watch Video Solution

50. What type of adaptation you can see in the plants growing in water logged conditions ?

Watch Video Solution

51. What type of chemical reaction is respiration ?

Watch Video Solution

52. In which part of the respiratory system of man , you can observe the 'C' shaped cartilagenous rings ?

Watch Video Solution

53. "Haemoglobin is dissolved in plasma ". In which animal you can observe this condition ?

Watch Video Solution

54. Name the part that plays major role in respiratory movements in woman .

Watch Video Solution

55. Give two examples for amphibians

Watch Video Solution

56. By which process the carbondioxide in the blood is exchanged for oxygen in the alveoli ?

Watch Video Solution

57. In which animals we can observe tracheal respiratory system ?

Watch Video Solution

58. Where can we can observe breathing or aerial roots ?

Watch Video Solution

59. What is the percentage of oxygen in atmosphere ?

Watch Video Solution

60. What are the respiratory organs of Dolphins ?

Watch Video Solution

61. What do the mountaineers and deep sea divers carry on their backs ?

Watch Video Solution

62. In which plants we can observe a special tissue to produce oxygen for respiration ?

Watch Video Solution

63. Why do we conduct bell jar experiment with sprouted seeds and lime water beaker ?

Watch Video Solution

64. How do you infer the presence of CO_2 in respiration experiments ?

Watch Video Solution

65. Why do we conduct bell jar experiment with sprouted seeds and thermometer ?

Watch Video Solution

66. Where do you find mangrove forests ?

Watch Video Solution

67. Which gas is evolved during the combustion of sugar ?

Watch Video Solution

68. Why lactic acid is formed in the muscles of athletes which causes severe pain ?

Watch Video Solution

69. Give two examples for respiratory diseases.

Watch Video Solution

70. How much amount of air remains in lungs after complete exhalation ?

Watch Video Solution

71. What are the respiratory organs of Cockroach ?

Watch Video Solution

72. What is the process through which respiration takes place in Amoeba and hydra ?

Watch Video Solution

73. In which organism do you observe cutaneous respiration ?

Watch Video Solution

74. Name the respiratory organs present in fish

Watch Video Solution

75. What are the respiratory organs of pulmonary respiration ?

Watch Video Solution

76. What is the main function of haemoglobin in blood ?

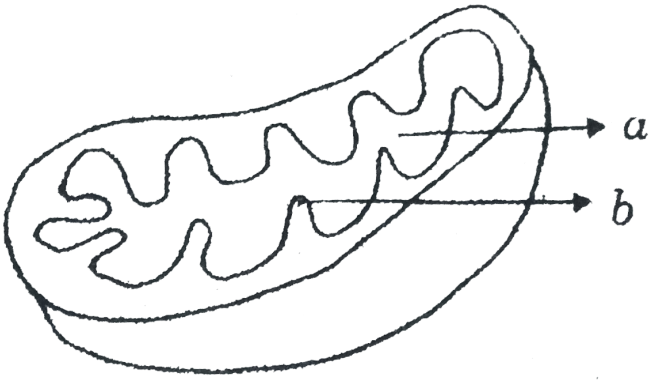
Watch Video Solution

77. The bark of which one of the following plants is used as a condiment in food stuffs?

Watch Video Solution

Creative Questions For New Model Paper 1 Mark Questions

1. Label a and b in the given diagram



Watch Video Solution

2. In what compound, the energy released during the breakdown of glucose is stored?

Watch Video Solution

3. Fermented idli, dosa produce smell. Name the microorganism responsible for producing such smell.

4. What are the end products of Aerobic and Anaerobic Respirations?

5. In which organisms, blood does not supply the Oxygen?

Watch Video Solution

6. Name the food material on which trypsin acts and name the end products

Watch Video Solution

7. Name chemical substance produced in human muscles during Anaerobic respiration .

Watch Video Solution

8. Why Diazene Green solution is added to the Glucose solution in anaerobic respiration experiment ?

Watch Video Solution

9. Can we say that combustion and respiration are almost same actions. What evidences do you have for this ?

Watch Video Solution

10. What is the role of epiglottis and diaphragm in respiration ?

Watch Video Solution

11. What is the pathway of air from nostril to alveolus ?

Watch Video Solution

12. What is respiration ?

Watch Video Solution

13. What does the respiration mean ?

Watch Video Solution

14. Who did comprehensive work on properties of gases , their exchange and respiration ?

Watch Video Solution

15. What was the gas liberated on heating powdered charcoal in a bell jar ?

Watch Video Solution

16. What was produced by combustion according to Lavoisier ?

Watch Video Solution

17. What is vitiated air ?

Watch Video Solution

18. Who was the renowned chemist ? Who wrote a textbook of Human Physiology ?

Watch Video Solution

19. What happens when air passes through nasal cavities ?

Watch Video Solution

20. What is the function of epiglottis ?

Watch Video Solution

21. Where does gaseous exchange take place in lungs ?

Watch Video Solution

22. What is breathing ?

Watch Video Solution

23. What is inspiration or inhalation ?

Watch Video Solution

24. What is expiration or exhalation ?

Watch Video Solution

25. What are pleura?

Watch Video Solution

26. What is cellular respiration ?

Watch Video Solution

27. What is aerobic respiration ?

Watch Video Solution

28. What is anaerobic respiration ?

Watch Video Solution

29. What does aerobic respiration occur in eukaryotic cells ?

Watch Video Solution

30. What is Glycolysis ?

Watch Video Solution

31. What is the fate of pyruvate in the absence of oxygen in plants ?

Watch Video Solution

32. What is the fate of pyruvate in the absence of oxygen in animals ?

Watch Video Solution

33. In aerobic respiration pyruvate is converted into ?

Watch Video Solution

34. What is the main reason for feeling pain in muscles after strenuous exercise ?

Watch Video Solution

35. What is fermentation ?

Watch Video Solution

36. By which process ethanol can be separated from yeast glucose mixture ?

Watch Video Solution

37. What is combustion ?

Watch Video Solution

38. In which organisms does exchange of gases take place through diffusion ?

Watch Video Solution

39. In tracheal, respiratory system which carry air directly to the cells in the tissues ?

Watch Video Solution

40. What is cutaneous respiration ?

Watch Video Solution

41. What are the other areas on the plant body through which gaseous exchange takes place ?

 Watch Video Solution

42. What is the full form of ATP ? How is it formed ?

 Watch Video Solution

43. What is the use of ATP ?

 Watch Video Solution

44. What are the factors that control respiration ?

Watch Video Solution

45. What are the substances that are used for the production of energy in all living organisms ?

Watch Video Solution

46. How many types of respiration are present ? What are they ?

Watch Video Solution

47. Where is energy stored in ATP ?

Watch Video Solution

48. What is the main differences between respiration and combustion ?

Watch Video Solution

49. Name the type of respiration in which the end products are (a)C_2H_5OH and CO_2 , (b) CO_2 and H_2O , (c) Lactic acid

Watch Video Solution

50. What is the equation that represents respiration ?

Watch Video Solution

51. What are the sites of cellular respiration ?

Watch Video Solution

52. What are cristae in mitochondria ?

Watch Video Solution

53. What is the net gain of ATP molecules in Glucolysis ?

Watch Video Solution

54. What are the number of ATP molecules produced when one glucose molecule is completely oxidised ?

Watch Video Solution

55. What are the three stages present in complete oxidation of glucose molecule ?

Watch Video Solution

56. Why does oxidation of fatty acids give more energy ?

Watch Video Solution

57. What is meant by aquatic animals and terrestrial animals ?

Watch Video Solution

58. Why is the rate of breathing in aquatic organisms such faster than terrestrial organisms ?

Watch Video Solution

59. Which part of roots is involved in the exchange of respiratory gases ?

Watch Video Solution

60. Name the areas in a woody stem through which respiratory exchange of gases takes place.

Watch Video Solution

61. Out of photosynthesis and respiration in plants which process occurs all the time and only at daytime ?

Watch Video Solution

62. What is the average breathing rate in an adult man at rest ?

Watch Video Solution

63. How the trachea is prevented from collapsing ?

Watch Video Solution

64. What has raised the percentage of carbon dioxide in exhaled air?

Watch Video Solution

65. What are the reasons for the animals to develop different types of respiratory organs ?

Watch Video Solution

66. Why do fishes die when taken out of water ?

Watch Video Solution

67. What would be the consequences of deficiency of haemoglobin in our bodies ?

Watch Video Solution

68. What is the composition of inhaled air?

Watch Video Solution

69. What is the composition of exhaled air ?

Watch Video Solution

70. Why does the amount of nitrogen not vary between exhaled and inhaled air ?

Watch Video Solution

71. In which kind of respiration is more energy released ?

Watch Video Solution

72. What are lenticels ?

Watch Video Solution

73. How does diaphragm help in inhalation ?

Watch Video Solution

74. "If there were no algae , there would be no fish in the sea." Comment.

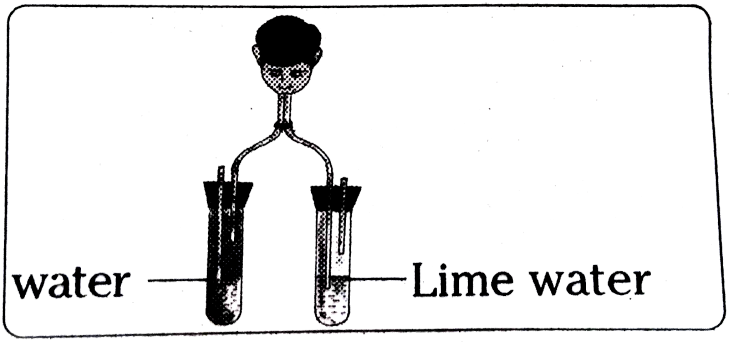
Watch Video Solution

Creative Questions For New Model Paper 2 Mark Questions

1. Which gas turns lime water milky ?

Watch Video Solution

2. Which gas do you think might be present in less quantities in the air we breath out as compared to air around us ?



Watch Video Solution

3. Balu said that , "Plants perform Photosynthesis during day time. They respire

during night time ".

Do you agree with Balu ? Why ? Why not ?

Watch Video Solution

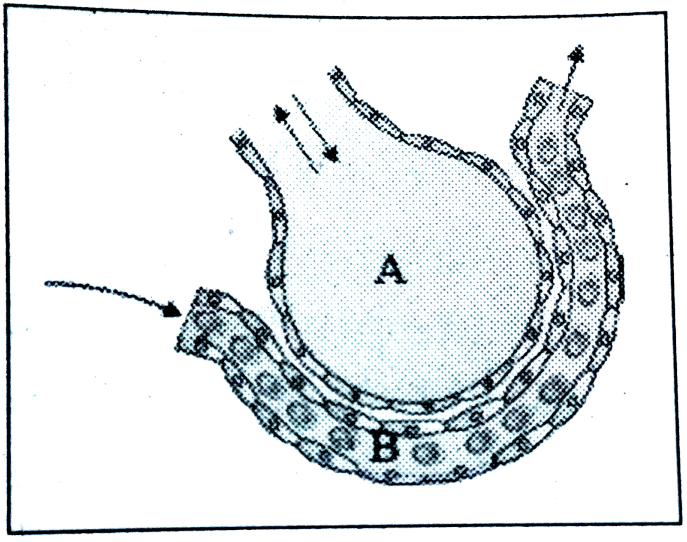
4. The sports man who participated in 100 mtr. Race get more muscle pains. But the sports man who participates in 5 km's race get less muscle pains. What is the reason ?

Watch Video Solution

5. What happens if there is no epiglottis in human beings ?

Watch Video Solution

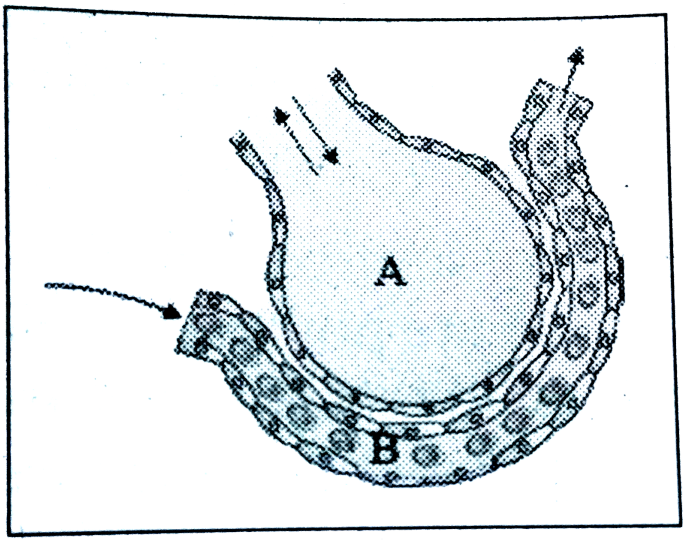
6. Observe the diagram.



This picture is related to which biosystem ?

Watch Video Solution

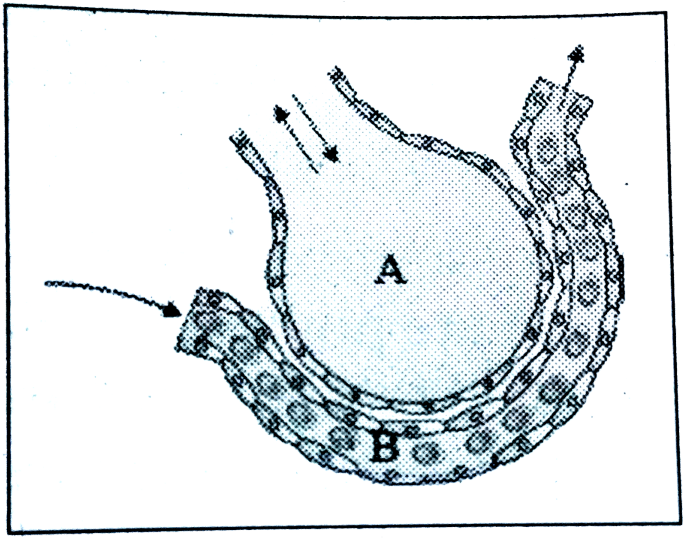
7. Observe the diagram.



Write the names of the parts of A,B

Watch Video Solution

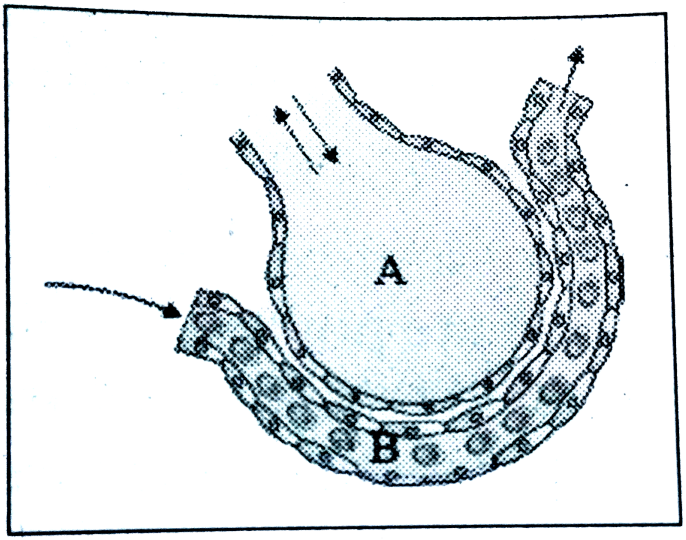
8. Observe the diagram.



To which system they are linked with ?

Watch Video Solution

9. Observe the diagram.



Which process is happening here ? What happens as a result of it ?

Watch Video Solution

10. A person reached a specific distance once on foot and once by running . In which situation his legs pain ? Why

Watch Video Solution

11. What is the advantage of the wet and warm passage of air from the nostrils to capillaries ?

Watch Video Solution

12. What is fermentation ? Why anaerobic respiration should not be used as synonym of fermentation ?

Watch Video Solution

13. See the below table . Write what you know from it .

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.03	4.4
Nitrogen	78	78

Watch Video Solution

14. How does the respiration in amoeba and hydra occur through diffusion ?

Watch Video Solution

15. Describe the process of respiration in Amoeba. State whether it is anaerobic respiration or aerobic respiration.

Watch Video Solution

16. What are different ways in which glucose is oxidised to provide energy in various organisms?

Watch Video Solution

17. How does respiration in plants differ from that in animals ?

Watch Video Solution

18. In human respiratory system different stages are there beginning with nostril to gaseous exchange between blood and cell. Which of these stages do you think is amazing ? Why do you think so ?

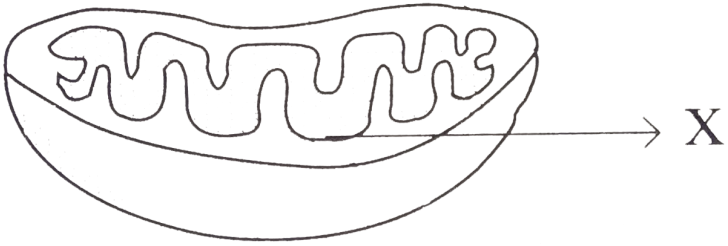
Watch Video Solution

19. After learning this lesson, what precautions will you take to protect your lungs ?

Watch Video Solution

Creative Questions For New Model Paper 4 Mark Questions

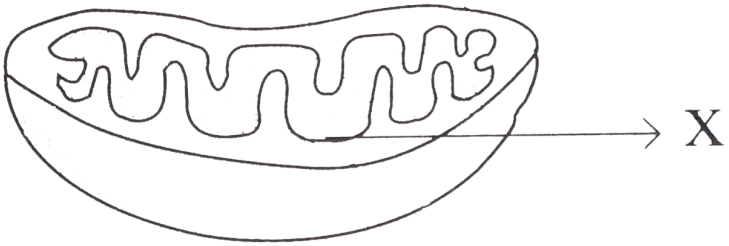
1. Observe the diagram and answer the following question.



What does the given diagram indicate ?

Watch Video Solution

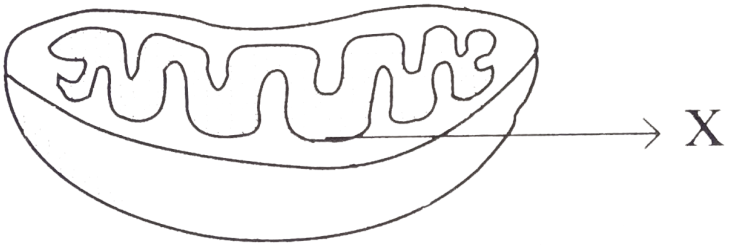
2. Observe the diagram and answer the following question.



What is the part 'x' in the diagram ?

Watch Video Solution

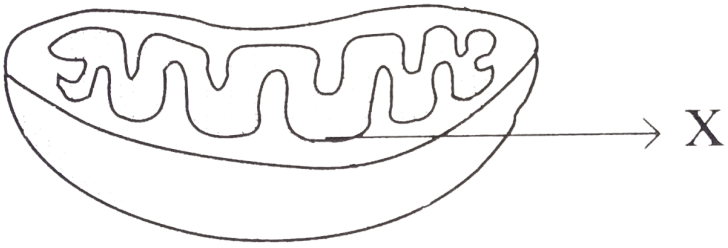
3. Observe the diagram and answer the following question.



What is the function of the given picture ?

Watch Video Solution

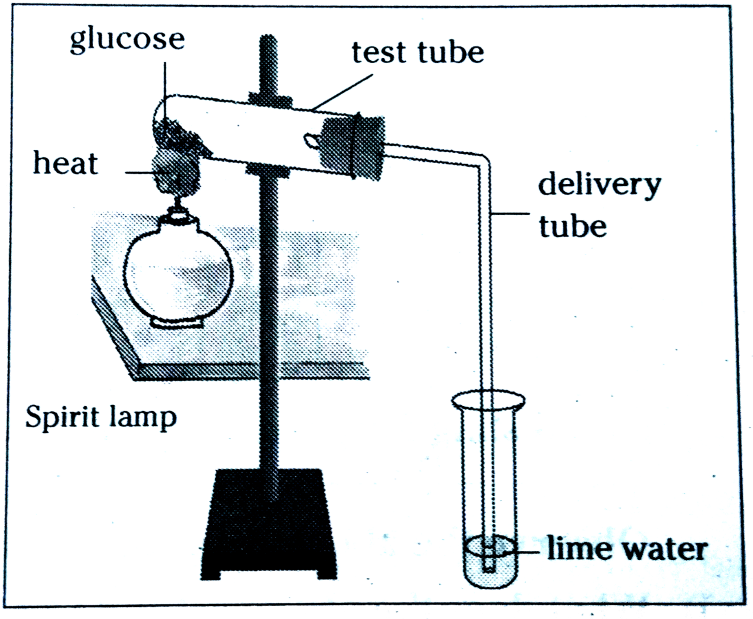
4. Observe the diagram and answer the following question.



To which system the given picture belongs to ?

Watch Video Solution

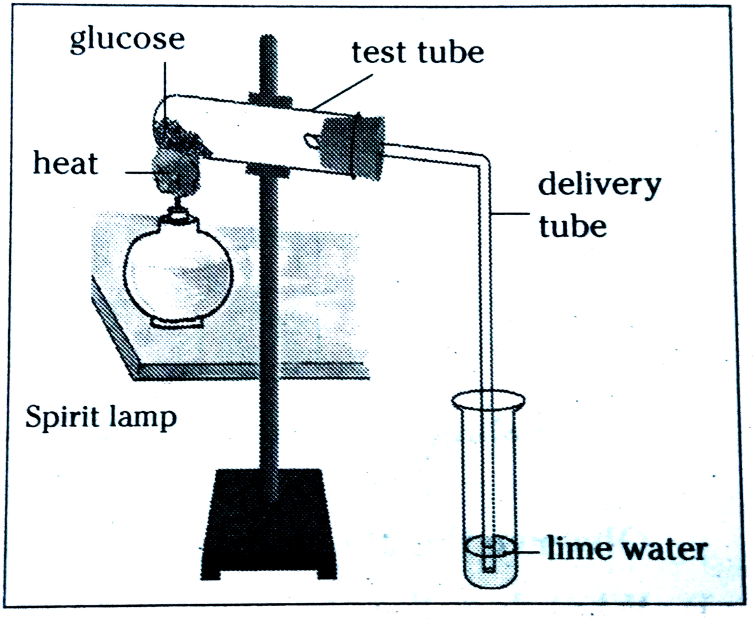
5. Observe the set of apparatus and answer the following question.



Which process do we know with the help of this experiment ?

Watch Video Solution

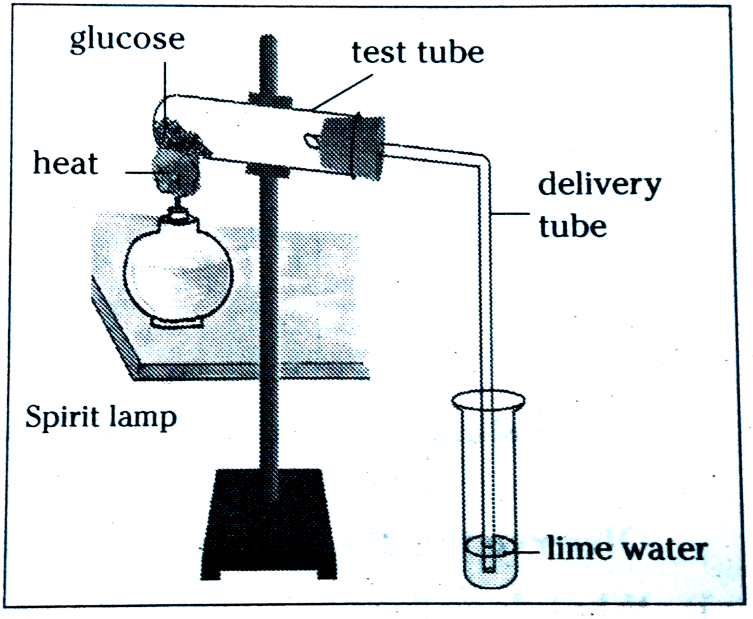
6. Observe the set of apparatus and answer the following question.



How does this process differ with respiration ?

Watch Video Solution

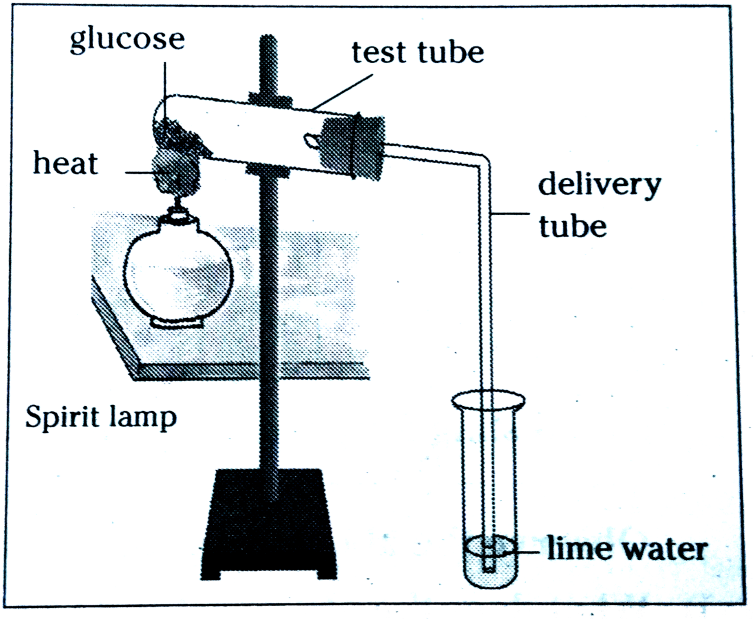
7. Observe the set of apparatus and answer the following question.



What are the similarities between this process and respiration ?

Watch Video Solution

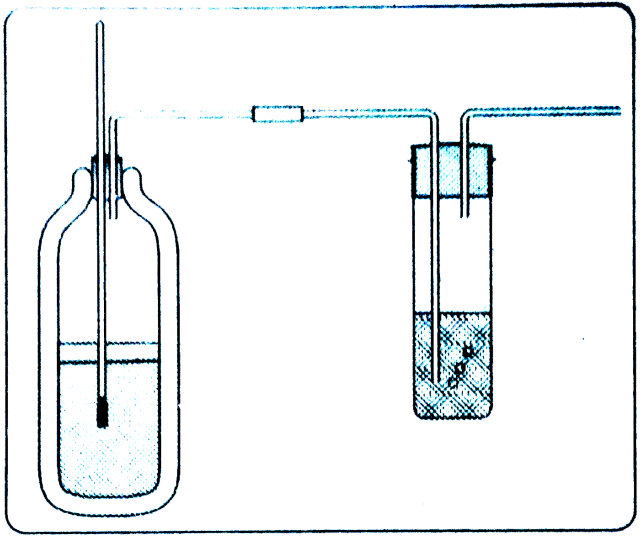
8. Observe the set of apparatus and answer the following question.



Which gas turns lime-water milky ?

Watch Video Solution

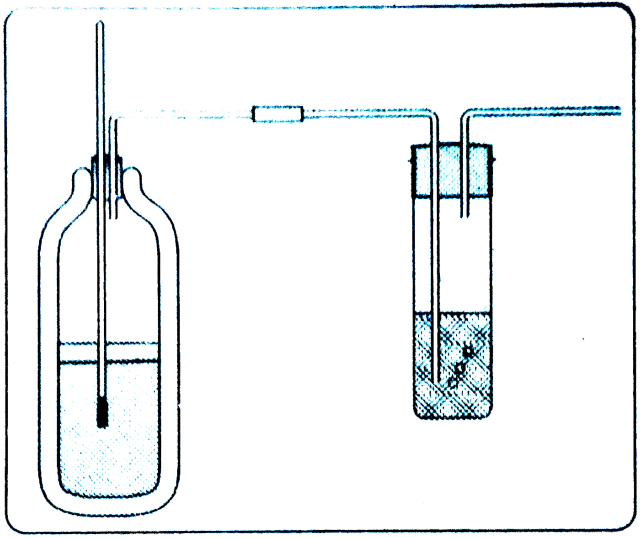
9. Look at the following experiment. Answer the questions .



What is the aim of the experiment ?

Watch Video Solution

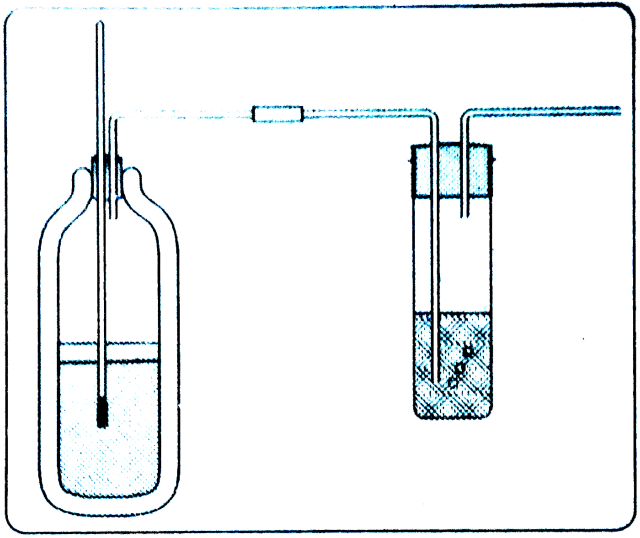
10. Look at the following experiment. Answer the questions .



How does the process differ with respiration ?

Watch Video Solution

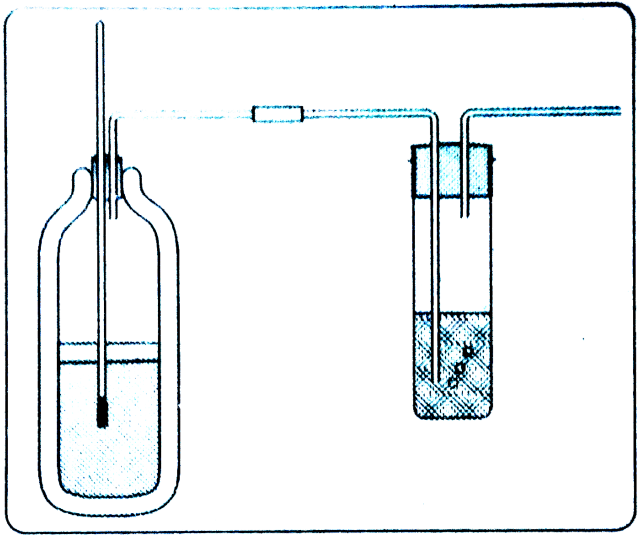
11. Look at the following experiment. Answer the questions .



What are the similarities between this process and respiration ?

Watch Video Solution

12. Look at the following experiment. Answer the questions .



Which gas turns lime-water milky ?

Watch Video Solution

13. Look at the following experiment . Answer the questions.

What is the aim of the experiment ?

View Text Solution

14. Look at the following experiment . Answer the questions.

Which agent is used to find the presence of oxygen ? What changes do you observe when oxygen is present in Glucose solution ?

View Text Solution

15. Look at the following experiment . Answer the questions.

Why liquid paraffin is poured on Glucose solution ?

View Text Solution

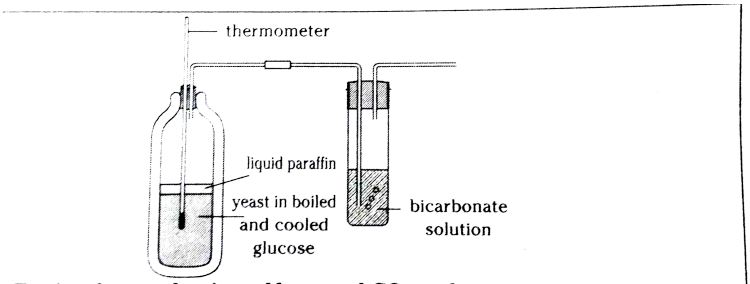
16. Look at the following experiment . Answer the questions.

Which gas released during the experiment ? How can you prove it ?

View Text Solution

17. Write about respiration in mangroves that grow in marshy lands.

Watch Video Solution



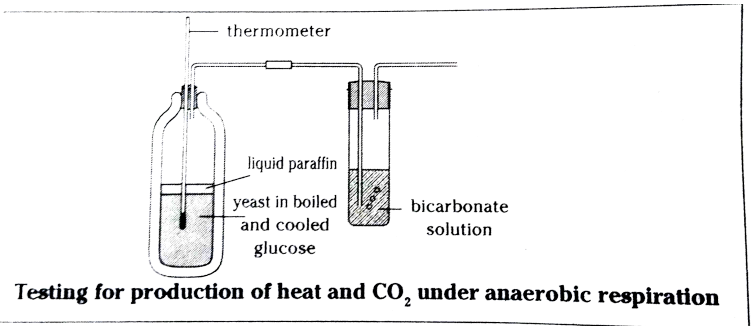
18. **Testing for production of heat and CO_2 under anaerobic respiration**

Observe the above diagram and answer the following questions :

What does the above setting (diagram) indicate ?

Watch Video Solution

19.

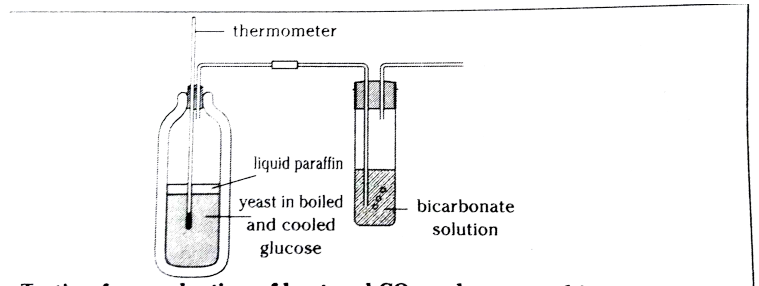


Testing for production of heat and CO_2 under anaerobic respiration

Observe the above diagram and answer the following questions :

Why boiled and cooled glucose is covered with paraffin ?

Watch Video Solution

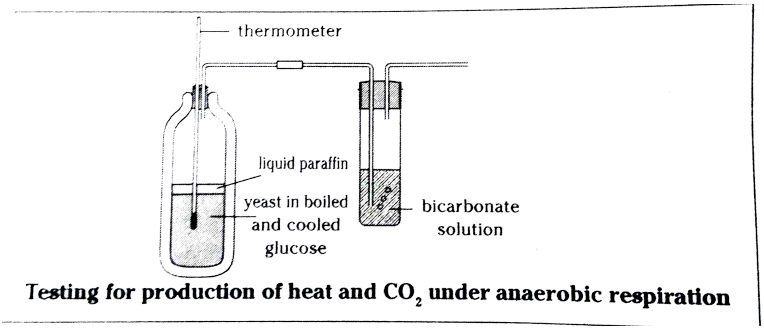


20. *Testing for production of heat and CO_2 under anaerobic respiration*

Observe the above diagram and answer the following questions :

What is the use of adding diazine green to glucose solution ? What change you notice in glucose solution ?

Watch Video Solution

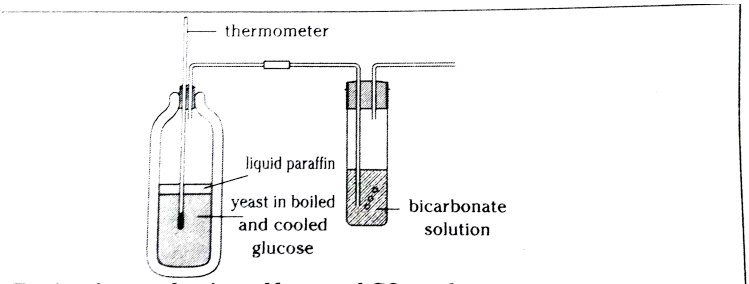


21. **Testing for production of heat and CO_2 under anaerobic respiration**

Observe the above diagram and answer the following questions :

Why the lime water is used in this experiment ?

Watch Video Solution

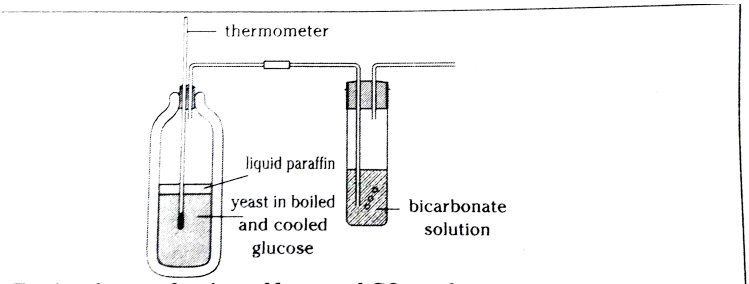


22. **Testing for production of heat and CO_2 under anaerobic respiration**

Observe the above diagram and answer the following questions :

Why is bulb of thermometer dipped in the glucose water

Watch Video Solution



23. **Testing for production of heat and CO_2 under anaerobic respiration**

Observe the above diagram and answer the following questions :

Why is bulb of thermometer dipped in the glucose water

Watch Video Solution

24. Explain with the help of a flow chart, the path way of air in humans .

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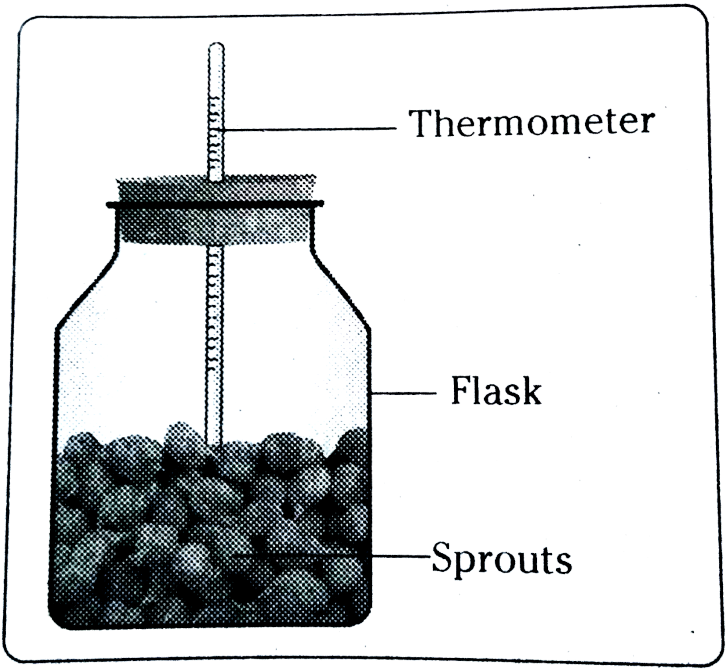
25. What is the aim of this experiment ?



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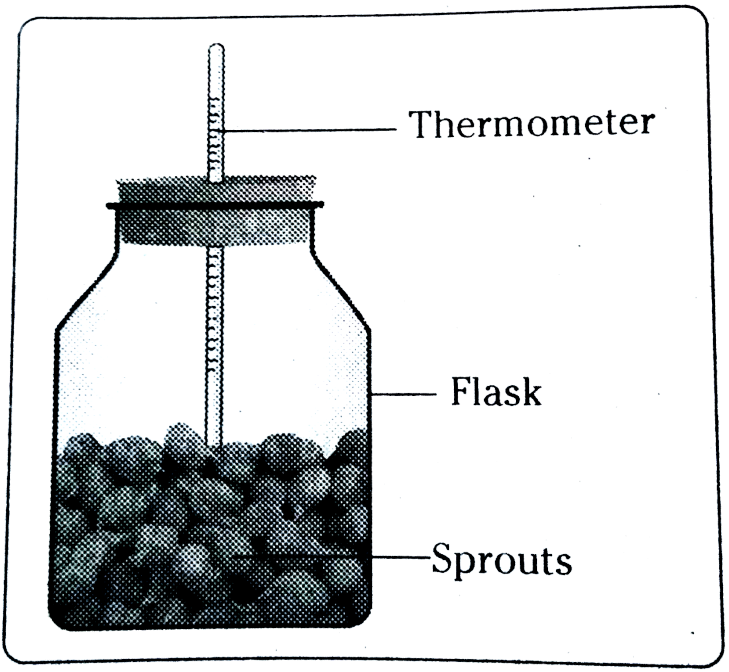
26. What change do you observe in thermometer readings ?



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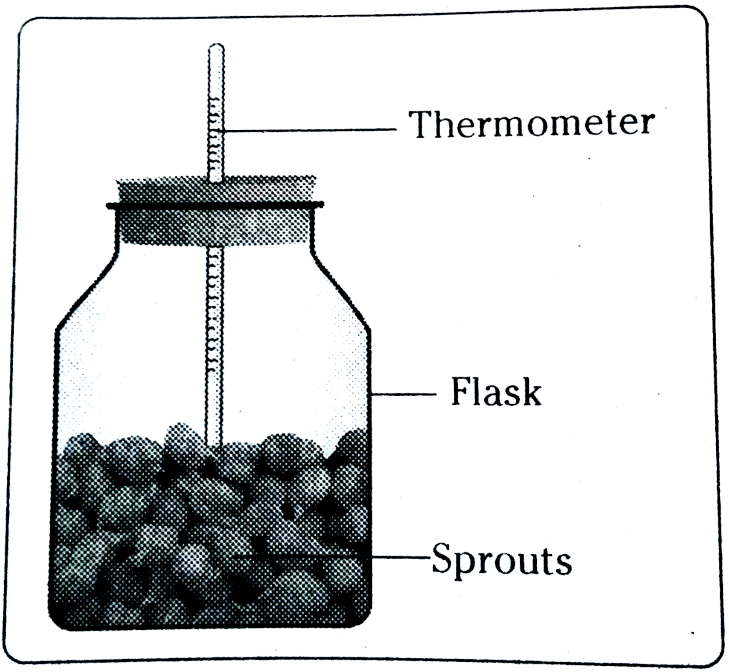
27. In your opinion , where did this heat come from ?



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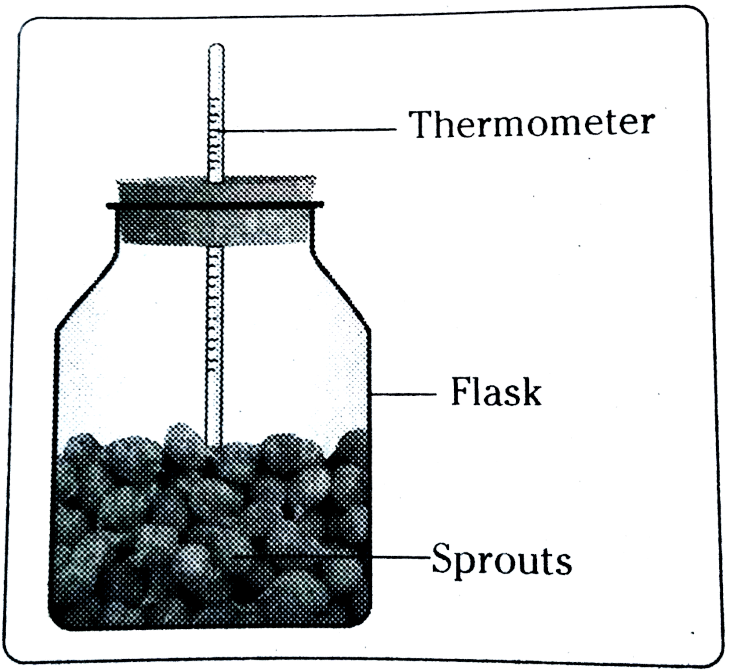
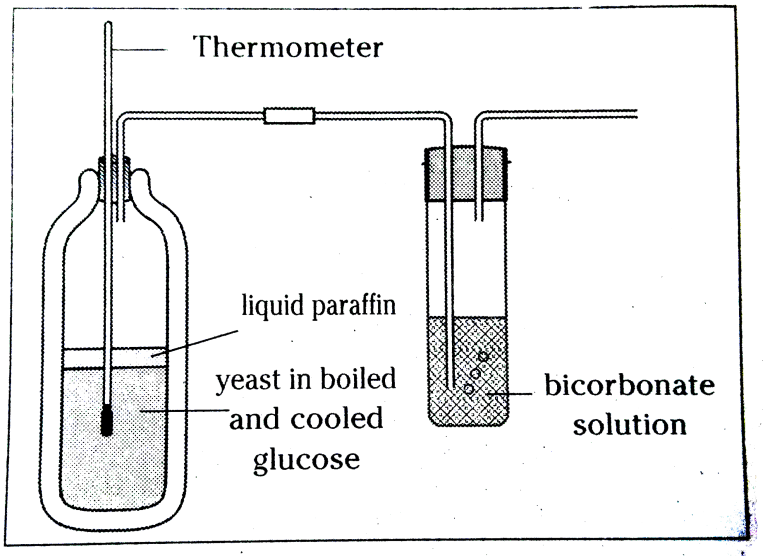
28. What precaution should we take , while doing this experiment ?



Watch Video Solution

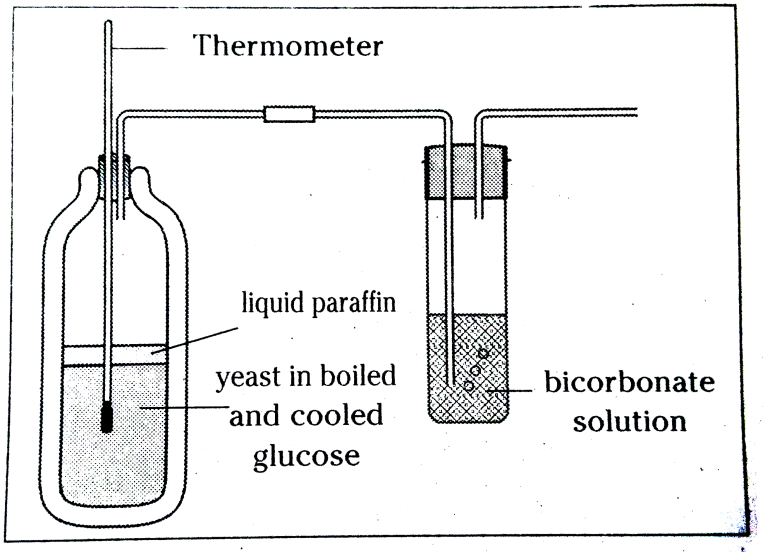
29. You have conducted this experiment in your class room. Now answer the following questions.



What do you prove by conducting this experiment ?

Watch Video Solution

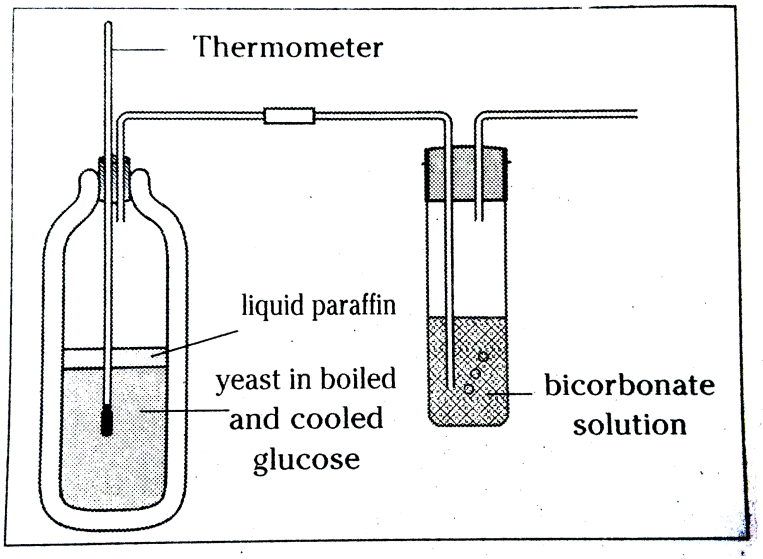
30. You have conducted this experiment in your class room. Now answer the following questions.



Why do you heat glucose solution ?

Watch Video Solution

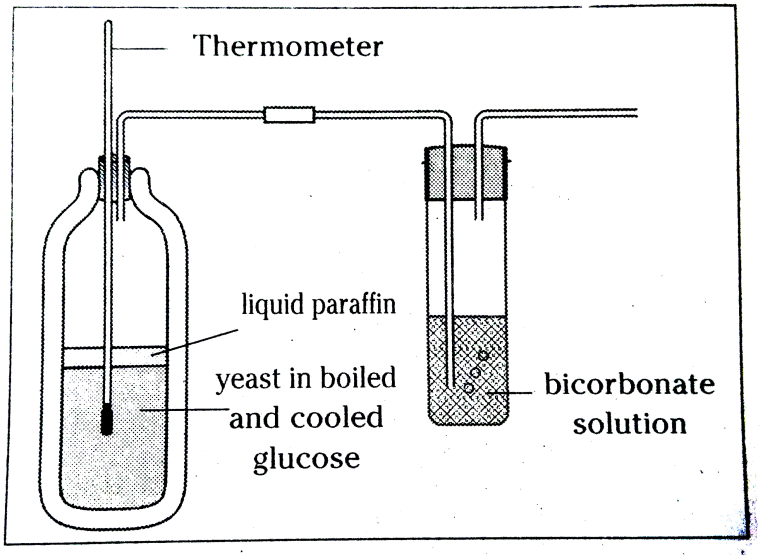
31. You have conducted this experiment in your class room. Now answer the following questions.



How do you confirm that glucose solution is free from oxygen after heating it ?

Watch Video Solution

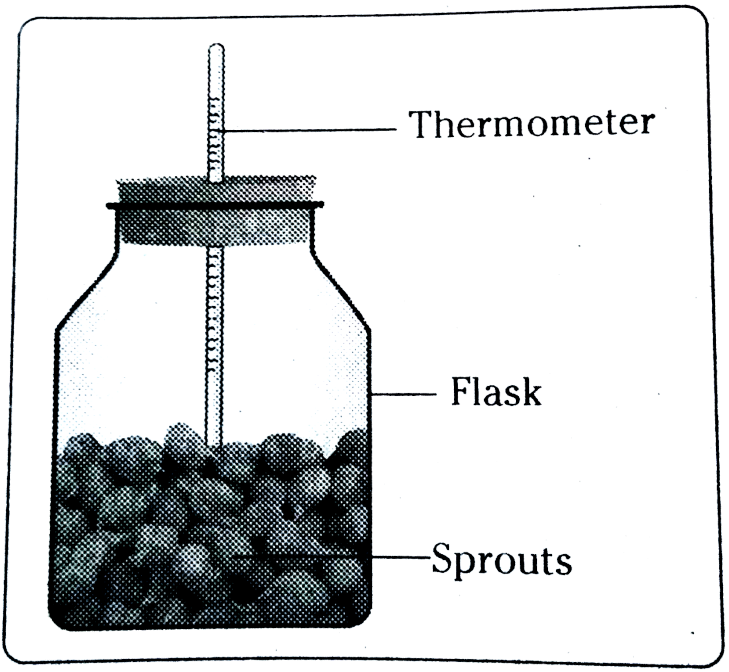
32. You have conducted this experiment in your class room. Now answer the following questions.



What are the changes you notice in the lime water ?

Watch Video Solution

33. What change do you observe in thermometer readings ?



Watch Video Solution

34. What change did you observe in the thermometer in the given experiment ?

Where does the heat come from ?

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35. What change did you observe in the thermometer in the given experiment ?

What result you will get , if you perform this experiment with dry seeds ?

Watch Video Solution

36. What change did you observe in the thermometer in the given experiment ?

What are the apparatus used in this experiment ?

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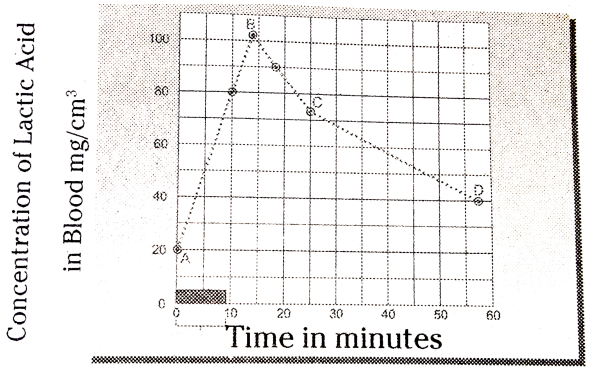
37. Observe the following graph and answer the questions given below .

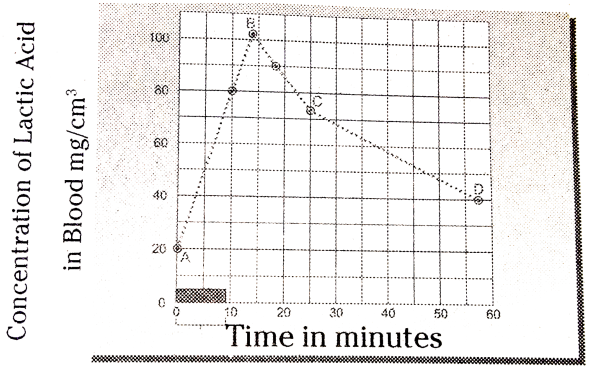


Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

What was the concentration of lactic acid in the blood to start with ?

Watch Video Solution

38. Observe the following graph and answer the questions given below .

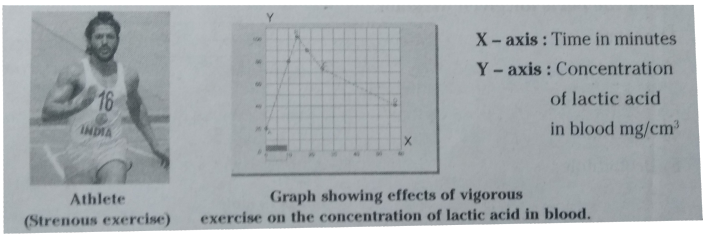


Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

In which state lactic acid concentration is more ?

Watch Video Solution

39. Study the graph given below and analyse the reasons for accumulation of lactic acid in blood after strenuous exercise.



Athlete (Strenous exercise)

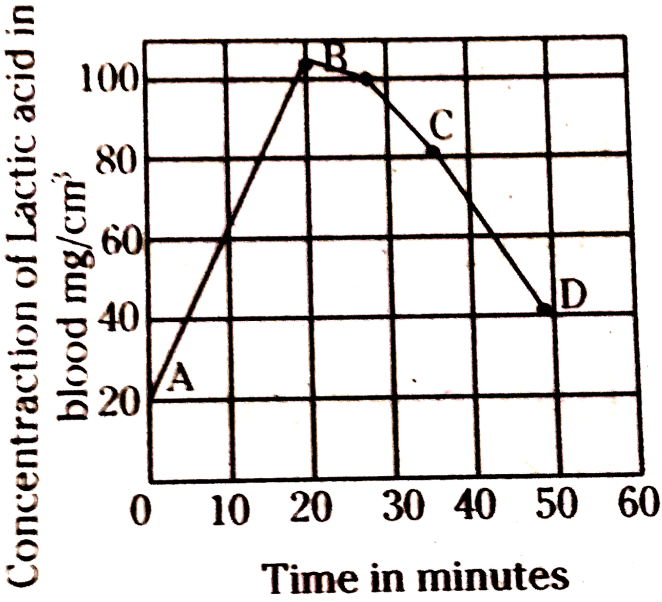
Graph showing effects of vigorous exercise on the concentration of lactic acid in blood.

Watch Video Solution

40. Study the graph and answer the following questions:

Graph showing effects of vigorous exercise on

the concentration of lactic acid in blood .



What is the relationship between lactic acid and muscle pain ?

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41. Describe the structure of mitochondria with the help of a diagram.

Watch Video Solution

42. Which cell organelle is called energy currency or power house of cell ?

Watch Video Solution

43. What do you know about the organelle that performs the cellular respiration ?

Watch Video Solution

44. Why does the exchange of gases happen only in alveoli, though arteries are present in pharynx, trachea and bronchus?

Watch Video Solution

45. Describe how oxygen enters the blood in lungs with the help of a block diagram.

Watch Video Solution

46. How does gaseous exchange occur in lungs ?

Watch Video Solution

47. What is the role of diaphragm and ribs in respiration ? Are both active in man and woman?

Watch Video Solution

48. Is respiration possible without diaphragm and ribs in human? Explain.

Watch Video Solution

49. Identify the mismatched pair.

1) WBC $\rightarrow$ Oxygen transportation

2) RBC $\rightarrow$ Microscopic policeman

3) Platelets $\rightarrow$ Blood coagulation.

Watch Video Solution

50. What are different ways in which glucose is oxidised to provide energy in various organisms?

Watch Video Solution

51. Write the adaptations seen in plants living in water logged conditions.

Watch Video Solution

52. Write a brief note on respiration in plants.

Watch Video Solution

53. How do you appreciate the mechanism of respiration in our body ?

Watch Video Solution

54. Write a brief note on tracheal respiration in insects .

Watch Video Solution

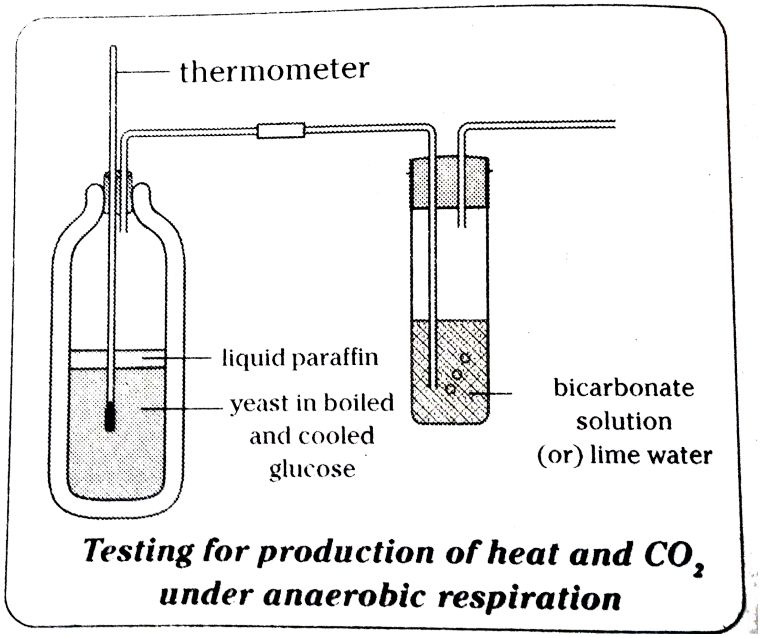
55. Explain the evolutionary changes in energy releasing system.

Watch Video Solution

56. Describe the structure of human lungs with the help of a diagram

Watch Video Solution

57. To observe Anaerobic respiration a student conducted experiment with yeast. In this experiment,

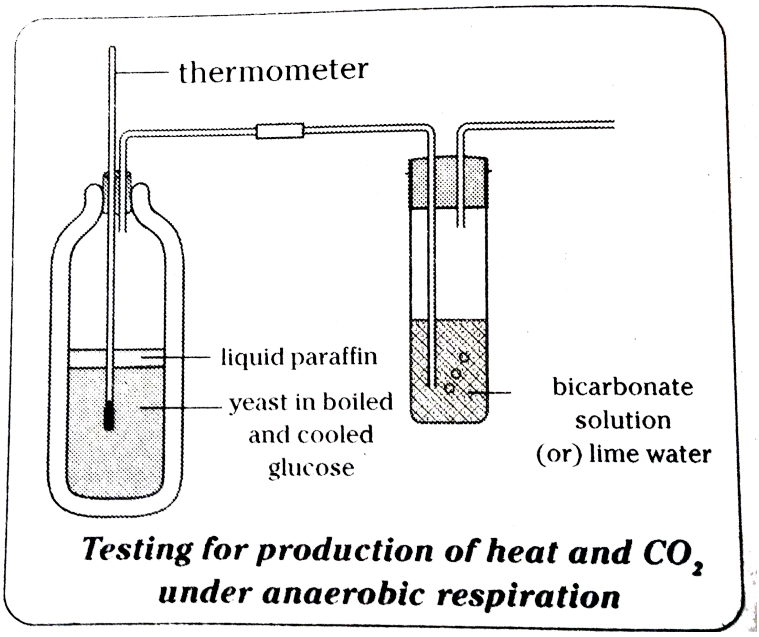


Testing for production of heat and CO_2 under anaerobic respiration

Why did he pour paraffin on glucose solution ?

Watch Video Solution

58. To observe Anaerobic respiration a student conducted experiment with yeast. In this experiment,

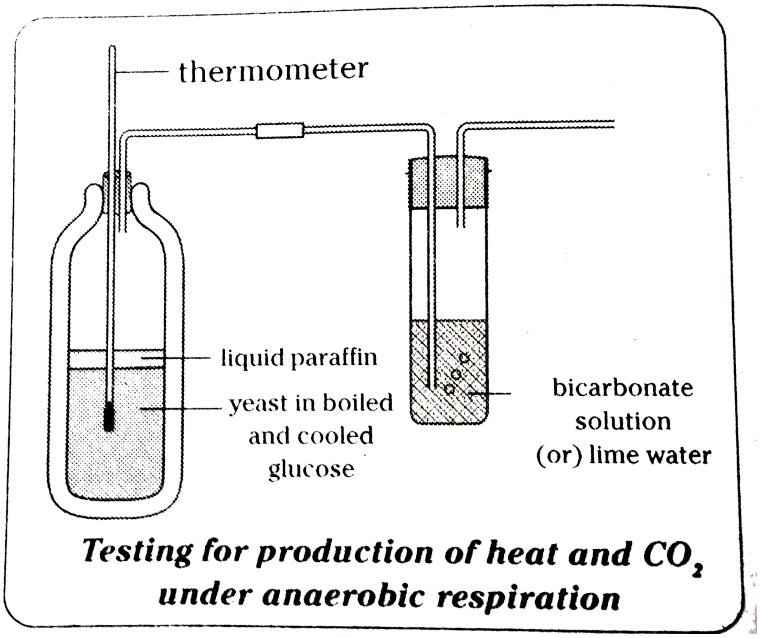


Testing for production of heat and CO_2 under anaerobic respiration

Why did he add diazine green (Janus Green) to the glucose solution before additing paraffin wax ?

Watch Video Solution

59. To observe Anaerobic respiration a student conducted experiment with yeast. In this experiment,



Testing for production of heat and CO_2 under anaerobic respiration

What did he do to speed up the test ?

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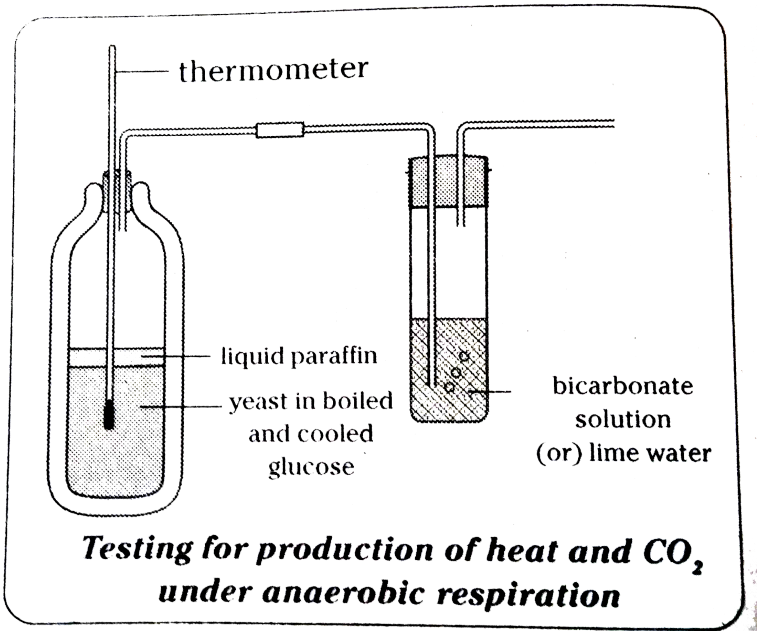
Watch Video Solution

60. To observe Anaerobic respiration a student conducted experiment with yeast. In this experiment,



Testing for production of heat and CO_2 under anaerobic respiration

What are the observations he made during the experiment ?

Watch Video Solution

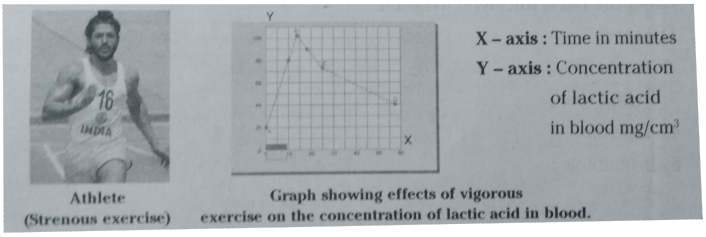
61. What is the pathway of air from nostril to alveolus ?

Watch Video Solution

62. What are the green house gases ?

Watch Video Solution

63. Study the graph given below and analyse the reasons for accumulation of lactic acid in blood after strenuous exercise.



Athlete (Strenous exercise)

Graph showing effects of vigorous exercise on the concentration of lactic acid in blood.

Watch Video Solution

64. Observe following table and answer the questions given below .

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.03	4.4
Nitrogen	78	78

Why does the amount of oxygen vary between exhaled and inhaled air ?

Watch Video Solution

65. Observe following table and answer the questions given below .

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.03	4.4
Nitrogen	78	78

Why does exhaled air contain more carbon dioxide ?

Watch Video Solution

66. Observe following table and answer the questions given below .

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.03	4.4
Nitrogen	78	78

Why there is no change in Nitrogen percentage in exhaled and inhaled air ?

Watch Video Solution

67. Draw a neat labelled diagram of power house of a cell. What is the function of inner membrane ?

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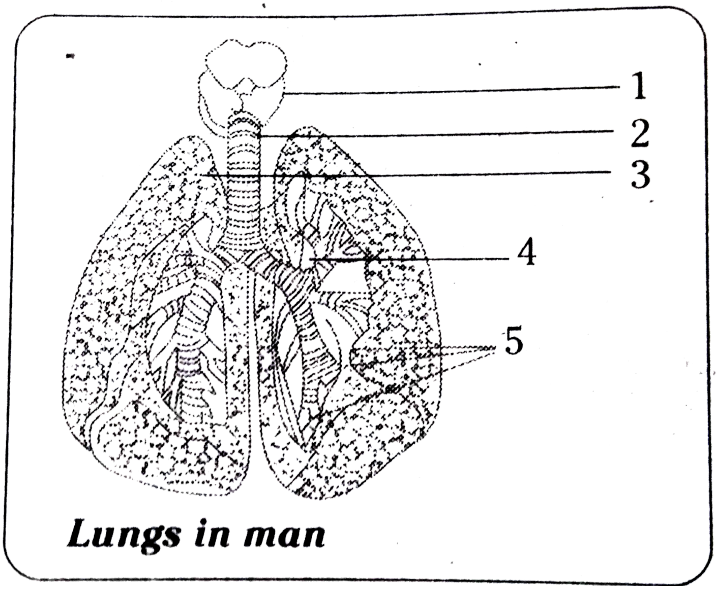
68. Label the parts for given diagram .



Lungs in man

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69. Draw a neat diagram to explain the exchange of gases at blood level and label the

parts.

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