



### **BIOLOGY**

# **NCERT - NCERT BIOLOGY(TELUGU)**

## RESPIRATION



1. Distinguish between Inspiration and Expiration



2. What are the differences between aerobic and anaerobic respiration? Name some organisms that use the anaerobic mode of respiration.

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3. Distinguish between Respiration and Combustion



4. Distinguish between Photosynthesis and Respiration

5. State two similarities between aerobic and anaerobic

respiration.

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6. Food sometimes enters the wind pipe and causes
choking. How does it happen ?
Watch Video Solution
7. Why does the rate of breathing increase while walking

uphill at a normal pace in the mountains ? Give two reasons.



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

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?

**9.** Balu said that , "Plants perform Photosynthesis during

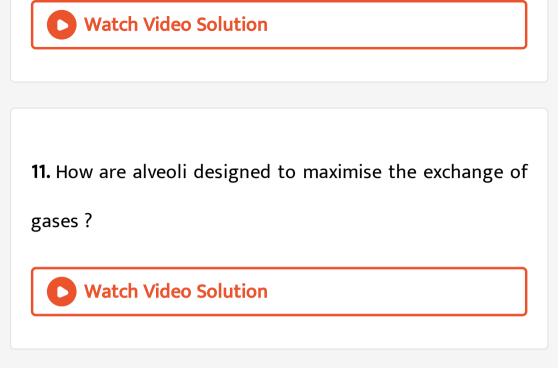
day time. They respire during night time ".

Do you agree with Balu ? Why ? Why not ?



10. Why does a deep sea diver carry oxygen cylinder on

his/her back?



**12.** 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?



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

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14. How does gaseous exchange take place at blood level ?           Watch Video Solution
<b>15.</b> Explain the mechanism of gaseous exchange at bronchiole level.

**16.** After a vigorous exercise or work we feel pain In muscles. What is the relationship between pain and respiration



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

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



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



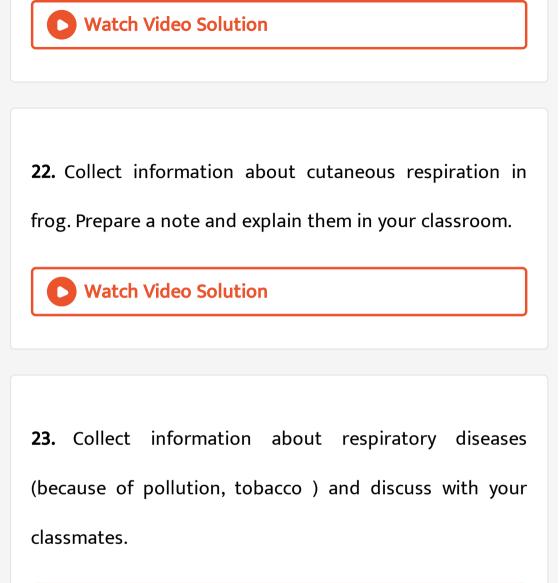
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**20.** What procedure do you follow to understand anaerobic respiration in your school laboratory ?



21. What are your observations in combustion of sugar

activity?





**24.** What is the pathway taken by air in the respiratory system? Illustrate with a labeled diagram.



25. Draw a block diagram showing events in respiration .

Write what you understood about cellular respiration :



26. How do you appreciate the mechanism of respiration

in our body?

27. Prepare an article on anaerobic respiration to present

school symposium

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28. Prepare a cartoon on discussion between haemoglobin

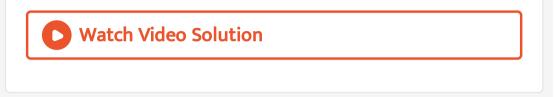
and chlorophyll about respiration.



29. Can it be said that Priestly's experiment helped us to

find out more about composition of air ? How ?

**30.** What was produced by combustion according to Lavoisier ?



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

**Watch Video Solution** 

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

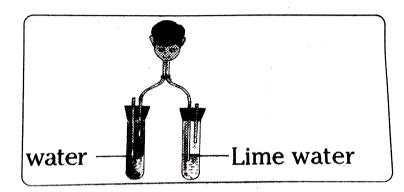
33. Which gas do you think is Lavoisier talking about when

he says chalky acid gas ?

<b>Watch Video Solution</b>
<b>34.</b> Which gas according to Lavoisier is respirable air ?
<b>Watch Video Solution</b>
<b>35.</b> What steps in the process of respiration does Lavoisier
mention ?

**36.** It is a common observation that our breath is warmer than the air around us, does respiration have anything to do with this ? Watch Video Solution 37. What does this experiment indicate? Watch Video Solution 38. Which gas turns lime water milky? Watch Video Solution

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



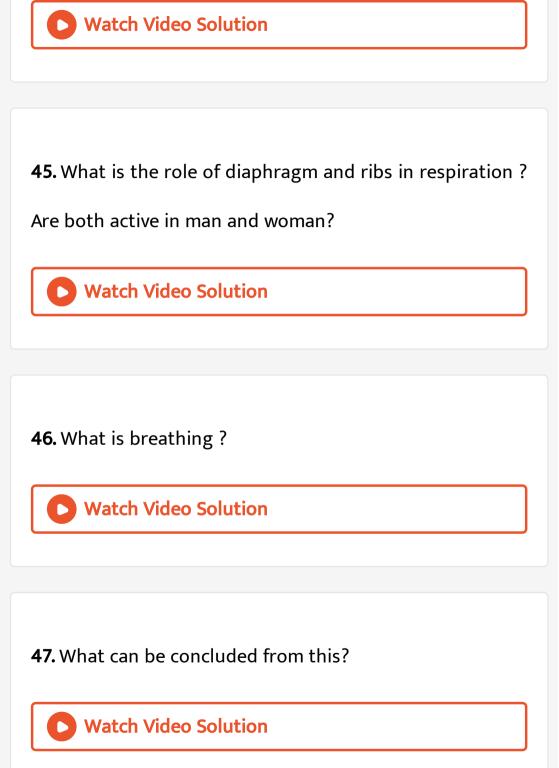


**40.** We are also aware of the fact that water vapour deposits on a mirror if we breathe out on it , where does this water vapour come from in Exhaled air ?

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

<b>Watch Video Solution</b>
<b>42.</b> Are both lungs similar in size ?
<b>Watch Video Solution</b>
<b>43.</b> Why are alveoli so smell and uncountable in number ?
<b>Watch Video Solution</b>

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



**48.** What happens during the process of breathing?

Watch Vid	eo Solutior	า	

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



50. Which gas needs to be removed from our body during

exhalation? Where does the extra amount of gas come

from ?

**51.** What is the composition of inhaled air?

Watch Video Solution
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52. When exhaled air is compared with inhaled air, is there

any difference in composition ?

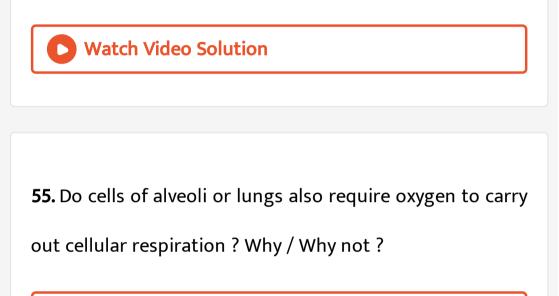


53. Why does the amount of oxygen vary between exhaled

and inhaled air ?

54. What has raised the percentage of carbon dioxide in

exhaled air?





56. After undergoing strenuous exercise we feel pain in

muscles, does adequate oxygen reach the muscles?

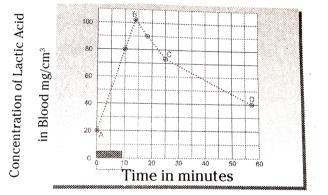


57. What is being formed in the muscles ?

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### 58. Observe the following graph and answer the questions

given below.



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

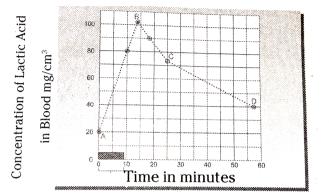
What was the concentration of lactic acid in the blood to

start with ?



#### 59. Observe the following graph and answer the questions

given below.



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

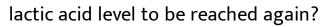
What was the greatest concentration reached during the

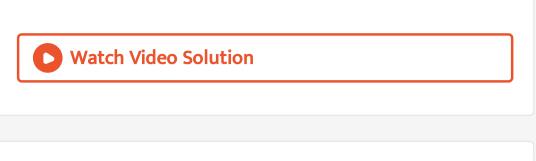
experiment?



60. If the trend between points C and D were to continue

at the same rate, how long might it take for the original





#### 61. Observe the following graph and answer the questions

#### given below.

Concentration of Lactic Acid in Blood mg/cm<sup>3</sup>

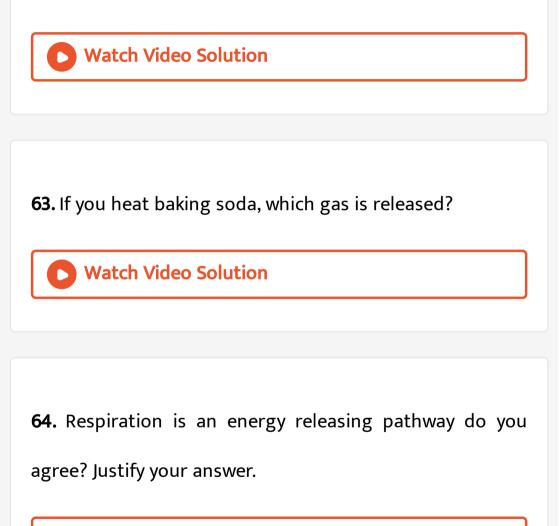
Graph showing effects of vigorous excercise on the concentration of lactic acid in blood.

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



62. Which gas is released when a baker prepares a dough

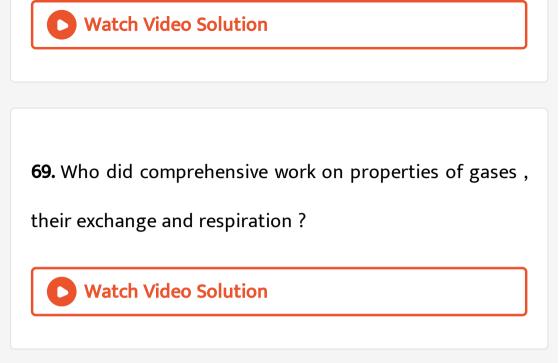
by mixing yeast in it?



**65.** What are the other ways in which our body loses heat?

<b>Watch Video Solution</b>
<b>66.</b> Is the rate of heat production always the same
Watch Video Solution
<b>67.</b> What are the end products of Aerobic and Anaerobic
Respirations?
Watch Video Solution

**68.** What is respiration ?



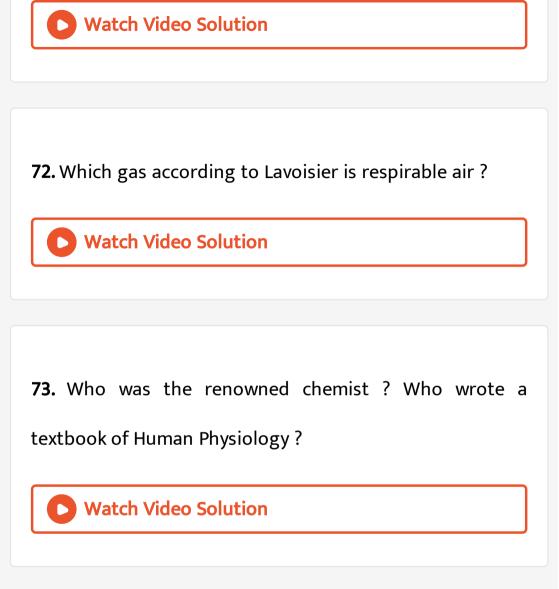
70. What was the gas liberated on heating powdered

charcoal in a bell jar ?



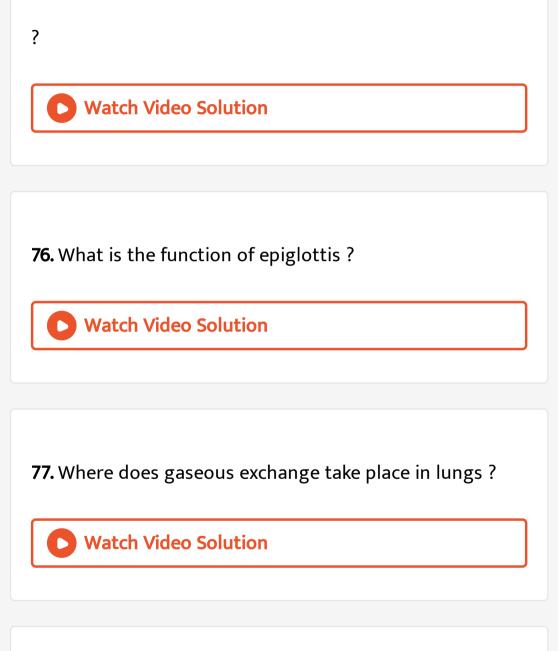
71. What was produced by combustion according to

Lavoisier ?

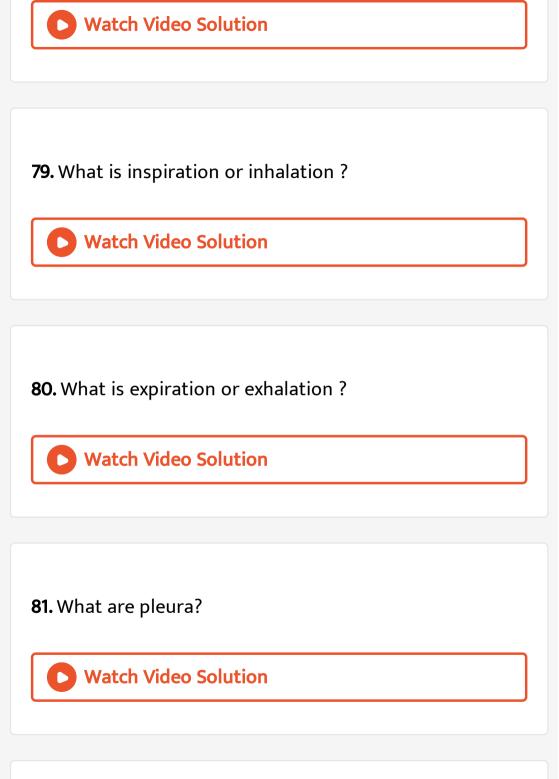


74. What is the pathway of air from nostril to alveolus ?

75. What happens when air passes through nasal cavities



78. What is breathing ?



82. 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.

Watch Video Solution
83. What is cellular respiration ?
<b>Watch Video Solution</b>
<b>84.</b> What is aerobic respiration ?
<b>Watch Video Solution</b>

85. What is anaerobic respiration ?

Watch Video Solution
<b>86.</b> What does aerobic respiration occur in eukaryotic cells
?
Watch Video Solution
<b>87.</b> What is Glycolysis ?
<b>Vatch Video Solution</b>

88. What is the fate of pyruvate in the absence of oxygen

in animals ?



89. What is the fate of pyruvate in the absence of oxygen

in animals ?

Watch Video Solution

90. What is the fate of pyruvate in the absence of oxygen

in plants ?

91. What is the main reason for feeling pain in muscles

after strenuous exercise ?

<b>Watch Video Solution</b>
<b>92.</b> What is fermentation ?
<b>Watch Video Solution</b>
<b>93.</b> What is combustion ?
<b>Watch Video Solution</b>

94. In which organisms does exchange of gases take place

through diffusion ?

O Watch Video Solution
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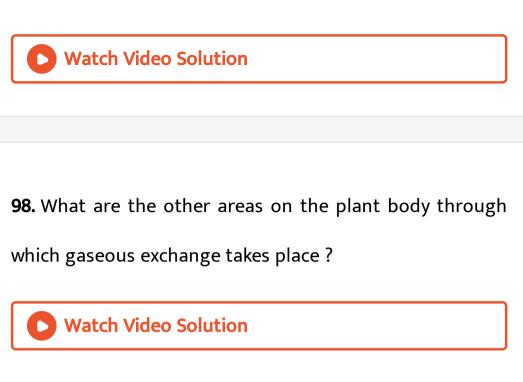
95. In which animals we can observe tracheal respiratory

system?

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96. Name the respiratory organs present in fish



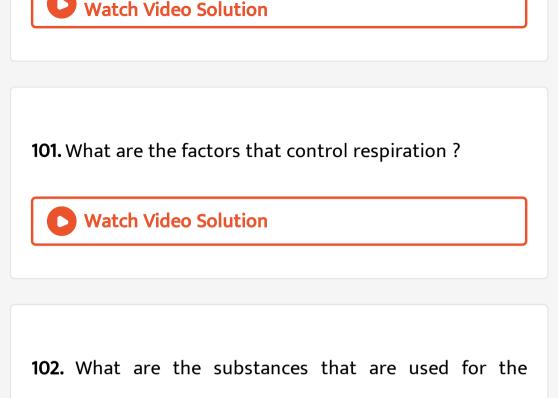


**99.** What is the full form of ATP ? How is it formed ?

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**100.** What is the use of ATP ?





production of energy in all living organisms ?

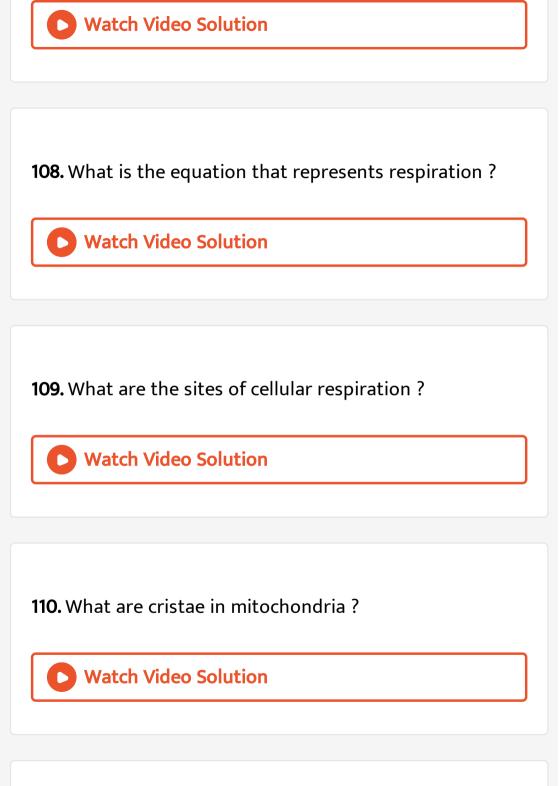


**103.** Name the types of respirations.

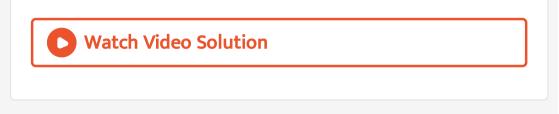
**104.** Where is energy stored in ATP?

Watch Video Solution
<b>105.</b> What is "the power house of the cell " ?
Watch Video Solution
106. What is the main differences between respiration and
combustion ?
<b>Watch Video Solution</b>

**107.** What are the end products of aerobic respiration ?



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



**112.** What are the number of ATP molecules produced

when one glucose molecule is completely oxidised ?

Watch Video Solution

**113.** What are the three stages present in complete

oxidation of glucose molecule ?

**114.** Why does oxidation of fatty acids give more energy ?

<b>Watch Video Solution</b>
115. Why is the rate of breathing in aquatic organisms
such faster than terrestrial organisms ?
Watch Video Solution
<b>116.</b> What is being formed in the muscles ?
Watch Video Solution

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



118. Name the areas in a woody stem through which

respiratory exchange of gases takes place.



119. Out of photosynthesis and respiration in plants which

process occurs all the time and only at daytime ?



120. Trachea divides into bronchi at the level of

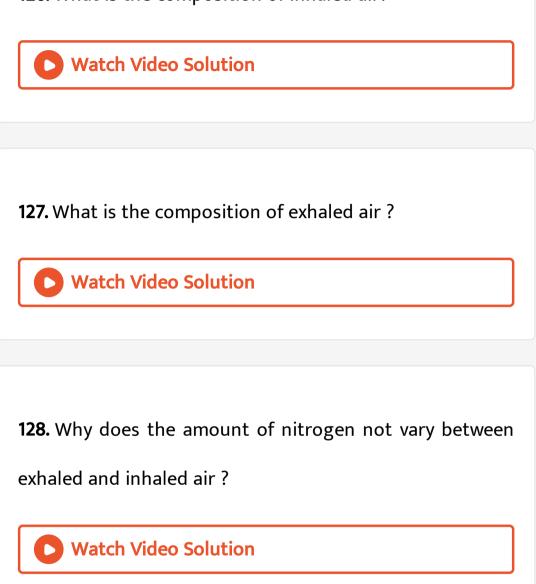
<b>Watch Video Solution</b>
<b>121.</b> What is the average breathing rate in an adult man at rest ?
<b>Watch Video Solution</b>
<b>122.</b> How the trachea is prevented from collapsing ?



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

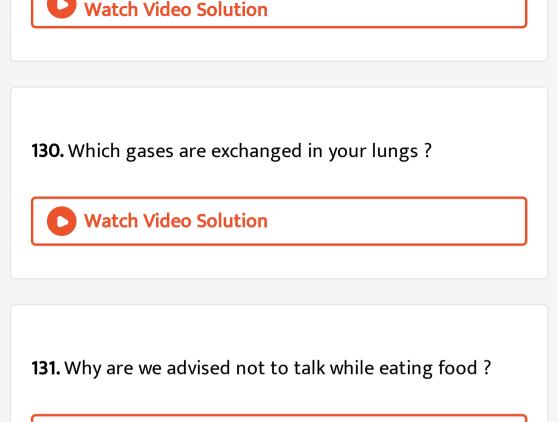
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<b>124.</b> Why do fishes die when taken out of water ?
<b>Vatch Video Solution</b>
<b>125.</b> What would be the consequences of a deficiency of haemoglobin in our bodies?





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



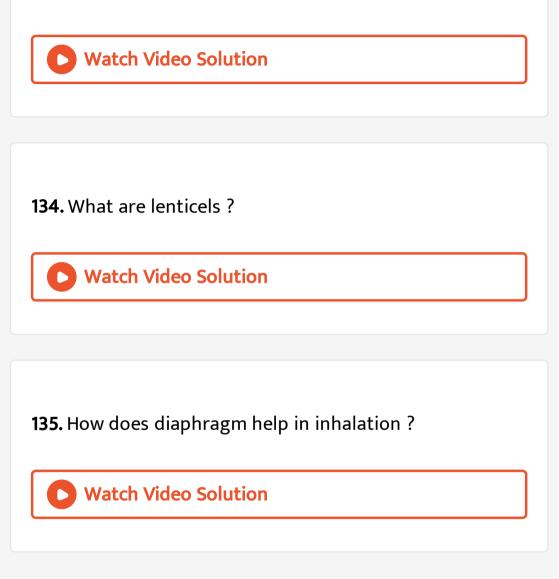


**132.** Why is diffusion insufficient to meet the oxygen requirements of multicellular organisms like humans?

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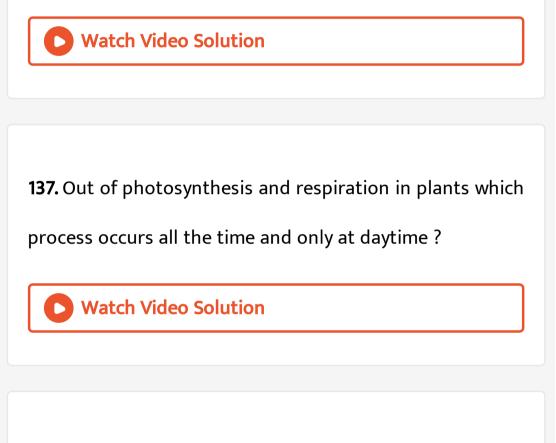
133. The bark of which one of the following plants is used

as a condiment in food stuffs?



136. Out of photosynthesis and respiration in plants which

process occurs all the time and only at daytime?



**138.** 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

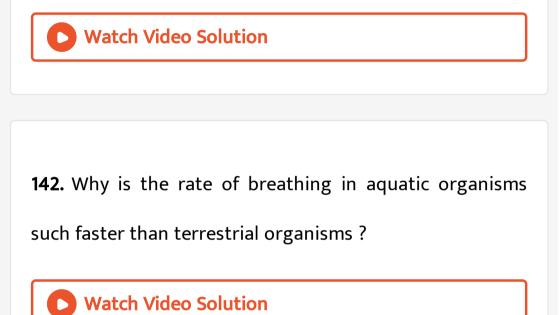
**139.** Name the type of respiration in which the end products are (a) $C_2H_5OH$  and  $CO_2$ , (b) $CO_2$  and  $H_2O$ , (c) Lactic acid

**Watch Video Solution** 

140. 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

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



143. What happens if farmer floods his field with water

daily?

144. Lungs are made up of air-filled sacs, the alveoli. They

do not collapse even after forceful expiration, because of:

<b>Watch Video Solution</b>
<b>145.</b> What is respiration ?
<b>Vatch Video Solution</b>
146. Why does a deep sea diver carry oxygen cylinder on
his/her back?
Watch Video Solution

147. How does the respiration in amoeba and hydra occur

through diffusion ?

• Watch Video Solution 148. Explain briefly about Pranayama - the art of breathing. • Watch Video Solution

149. What are different ways in which glucose is oxidised

to provide energy in various organisms?



150. What is residual volume of air?

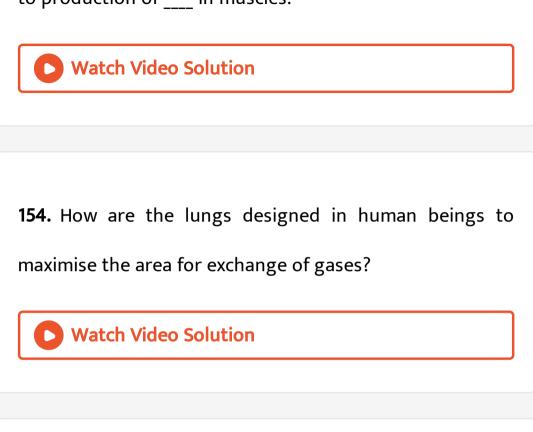
<b>Watch Video Solution</b>
<b>151.</b> What are the dangerous effects of inhaling air containing carbon monoxide?
Watch Video Solution

152. How does respiration in plants differ from that in

animals ?

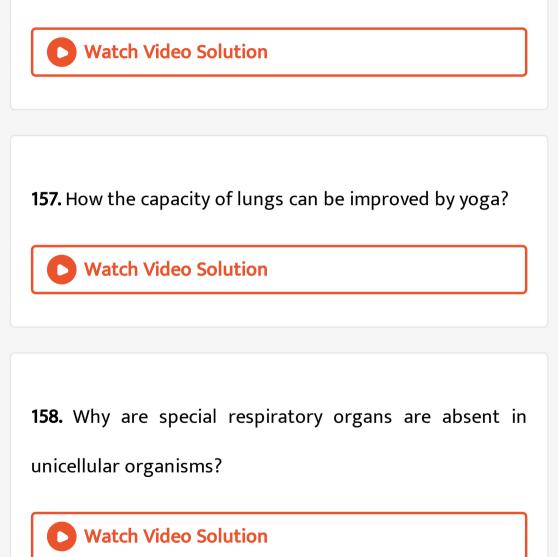
153. Cramps are formed during vigrous exercise, it is due

to production of \_\_\_\_ in muscles.

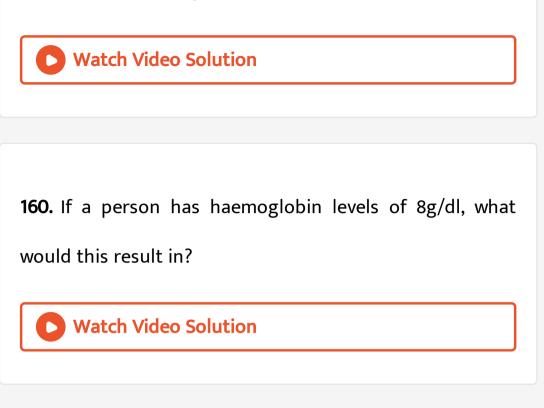


**155.** What advantage over an aquatic organism does a terrestrial organism have with regard to obtaining oxygen for respiration?

**156.** What is the reason for the high breathe rate in a weight lifter during weight lifting?



**159.** Do trachea collapse when there is no air in it?



161. What are the reasons for the animals to develop

different types of respiratory organs ?



**162.** What are the end products of fermentation ?

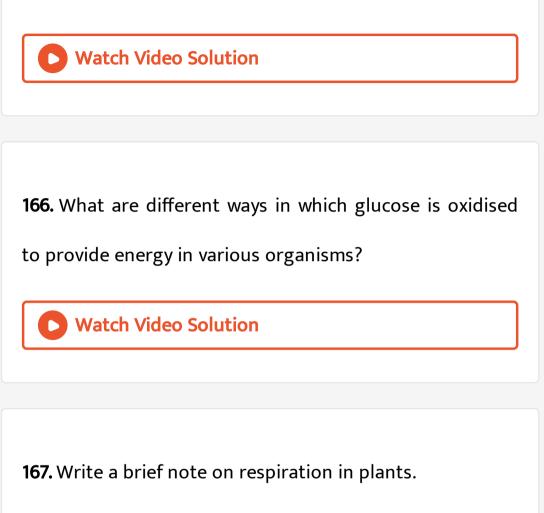
<b>Watch Video Solution</b>
163. What is the role of diaphragm and ribs in respiration
? Are both active in man and woman?
Watch Video Solution

164. By which process the carbondioxide in the blood is

exchanged for oxygen in the alveoli?

165. Why is human life impossible at higher altitude

without a supplementary supply of oxygen?





168. Write the adaptations seen in plants living in water

logged conditions.

<b>Watch Video Solution</b>
<b>169.</b> Write a brief note on tracheal respiration in insects .
<b>Watch Video Solution</b>
<b>170.</b> Describe the mechanism of branchial or gill respiration in fishes.
<b>Vatch Video Solution</b>

171. Write about the mechanism of respiration in human

beings.

<b>Watch Video Solution</b>
<b>172.</b> Explain the evolutionary changes in energy releasing system.
Watch Video Solution
<b>173.</b> Describe the structure of mitochondria with the help

of a diagram.



174. Describe the structure of human lungs with the help

of a diagram

Watch Video Solution

**175.** Why is it necessary to separate oxygenated and deoxygenated blood in mammals and birds?



176. Draw a neat labelled diagram showing movement of

diaphragm during inspiration and expiration.



**177.** Draw a neat diagram showing diffusion pathway of gaseous exchange between lung and blood capillaries. Label parts.



**178.** Draw a neat labelled diagram of power house of a cell.

What is the function of inner membrane?



179. Draw a neat diagram showing respiratory organs in

plants.

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

A. Photosynthesis

**B.** Respiration

C. Excretion

D. Circulation

## Answer:



**181.** From which language the word respiration came ?

A. English

B. Greek

C. Latin

D. French

Answer:

Watch Video Solution

**182.** What was the gas liberated on heating powdered

charcoal in a bell jar ?

A. Carbon dioxide

B. Oxygen

C. Nitrogen

D. All

Answer:

Watch Video Solution

**183.** What gas is needed for combustion of substances ?

A. Oxygen

B. Carbon dioxide

C. Phosphorus

D. Nitrogen

Answer:



**184.** The air we breathe out is warmer than air because.

A. Water

B. Lime water

C. Sodium hydroxide

D. Sugar solution

#### Answer:



185. Cellular respiration

## A. Mitochondria

- B. Cytoplasm
- C. Cytoplasm
- D. Cell membrane

## Answer:

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186. Number of ATP molecules involved in the synthesis of

each molecule of Glucose in photosynthesis process\_\_\_\_\_

A. 7600 calories

B. 7800 calories

C. 7200 calories

D. 7500 calories

## Answer:

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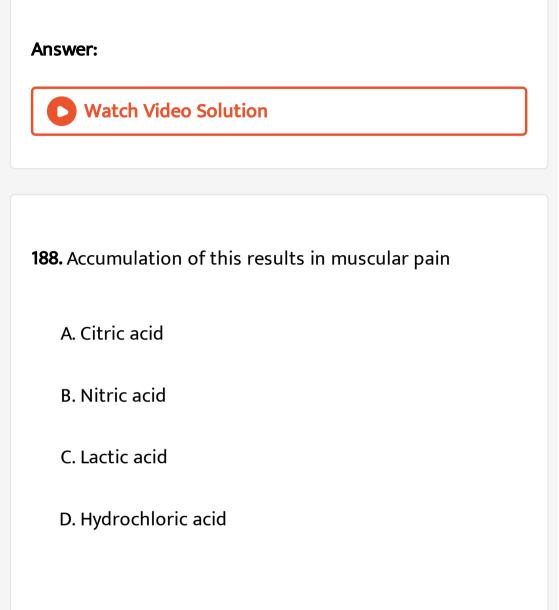
**187.** Name the first stage in the oxidation of glucose molecule.

A. Kreb's cycle

B. Calvin cycle

C. Electron transport

D. Glycolysis



#### Answer:



**189.** The volume of the dough increased in bread preparation due to

A. Diffusion

**B.** Fermentation

C. Distillation

D. Evaporation

## Answer:



190. 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 ."

A. Lavoisier

B. Priestly

C. Engleman

D. Ingenhouz

Answer:

Watch Video Solution

191. Feather -like gills occur in

A. Terrestrial respiration

- B. Aquatic respiration
- C. Pulmonary respiration
- D. All types of respiration

## **Answer:**



# 192. Pulmonary respiration occurs through

A. Skin

- B. Lungs
- C. Tracheal
- D. Bronchus

## Answer:



193. Haemoglobin is a

A. Oxygen only

B. Carbon dioxide only

C. Both oxygen and carbon dioxide

D. Nitrogen only

Answer:

194. What are the end products of aerobic respiration?

A.  $CO_2$ 

 $\mathsf{B.}\,H_{20}$ 

C. Energy

D. All of the above

#### **Answer:**



**195.** Name the factors responsible for high transpiration

rate in plants?

A. Photosynthesis

B. Transport

C. Nutrition

**D.** Circulation

#### Answer:

Watch Video Solution

**196.** Name the structure that plays important role in respiratory movements.

A. Epiglottis

B. Sinus venosus

C. Monocyte

# D. Diaphragm

#### Answer:



197. The number of lobes in the right and left lung of man

respectively are

A. 2

- B. 3
- C. 4
- D. 5



# 198. Arrange the following in order

- (1) Pharynx
- (2) Larynx
- (3) Alvelous
- (4) Bronchus.
  - A. A part of trachea
  - B. A part of lungs
  - C. An upper part of trachea
  - D. A part of bronchiole



**199.** Which of the following is the correct sequence of air passage during in-halation?

A.

Nostrils 
ightarrow larynx 
ightarrow pharynx 
ightarrow trachea 
ightarrow lungs

B. Nasal passage --> trachea to pharynx to larynx to

alveoli

 $\mathsf{C}. \ Larynx \rightarrow nostrils \rightarrow pharynx \rightarrow lungs$ 

D.

Nostril 
ightarrow pharynx 
ightarrow larynx 
ightarrow trachea 
ightarrow alveoli





# 200. Vocal cords are present in this part of respiration

system

A. Pharynx

B. Larynx

C. Bronchus

D. Lungs



201. Trachea are found in

A. Wind pipe

B. Sound box

C. Vocal cords

D. Septum

Answer:

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**202.** The exchange of gases in the alveoli of the lungs takes place by

A.  $60m^3$ 

 $\mathsf{B}.\,160m^2$ 

 $C.80m^2$ 

D.  $100m^2$ 

#### Answer:

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**203.** The flexible and flattened muscle presenet in the chest cavity which is useful to move lungs forward and backward is

A. Rib cage

B. Diaphragm

C. Epiglottis

D. Oesophagus

#### Answer:

Watch Video Solution

# 204. What is the percentage of oxygen in the exhaled air ?

A. 21

B. 16

C. 79

D. 14



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

A. Oesophagus

B. Palate

C. Glottis

D. Epiglottis

Answer:

Watch Video Solution

**206.** From where do the single celled organisms get oxygen ?

A. Air

B. Soil

C. Water

D. Both air and water

#### Answer:

Watch Video Solution

**207.** The intermediate product formed when  $NH_3$  is prepared form urea is

# A. Combustion

B. Respiration and combustion

C. Respiration

D. Heating charcoal powder

#### Answer:

Watch Video Solution

208. What are the respiratory organs of Cockroach ?

A. Blood vessels

- B. Mucous gland
- C. Gills

D. Trachea

#### Answer:



209. How does the respiration in amoeba and hydra occur

through diffusion ?

A. Transpiration

**B.** Osmosis

C. Diffusion

D. Inhalation



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

A. Frog

B. Earthworm

C. Leech

D. All of the above

Answer:

Watch Video Solution

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

A. Body size habitat in which they live

B. Availability of water

C. Type of circulatory system

D. All of the above

#### Answer:

Watch Video Solution

**212.** In an annual plant, exchange of gases takes place mainly through

A. Stomata

- B. Surface of roots
- C. Lenticels on stem
- D. All of the above

#### Answer:

Watch Video Solution

213. Breathing roots are present in

A. Aquatic plants

- B. Mangrove plants
- C. Terrestrial plants

D. Desert plant

#### Answer:



**214.** What are the end products of aerobic respiration ?

A.  $CO_2$ 

 $\mathsf{B.}\,H_2O$ 

C. Energy

D. All of the above



215. Energy currency of the cell is

A. ATP

B. DDT

C. DTP

D. ADP

Answer:



216. In cockroaches air enters the body through

A. Lungs

B. Gills

C. Spiracles

D. Skin

Answer:

Watch Video Solution

217. Which of the following is most likely to have higher

breathing rate?

A. Dog

B. Cat

C. Buffalo

D. Man

Answer:

Watch Video Solution

**218.** Exhaled air contains \_\_\_\_ and \_\_\_\_

A. Carbon dioxide

B. HO

C. Nitrogen

 $D.CO_2, H_2O$ 



219. A flap like muscular valve controls movement of air

and food is \_\_\_\_\_

A. Glottis

B. Palate

C. Epiglottis

D. Larynx



220. Lenticels are the respiratory organs that exist in \_\_\_\_

part of the plant.

A. Young part

B. Soft part

C. Woody part

D. None of the above

#### Answer:

Watch Video Solution

221. Mangrove trees respire with their \_\_\_\_\_

A. Stems

**B.** Leaves

C. Aerial roots

D. Roots

Answer:



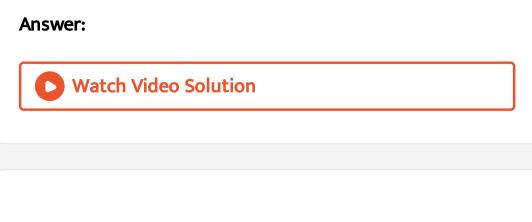
222. Cluster of air sacs in lungs are called

A. Bronchioles

B. Bronchus

C. Bronchi

D. All of the above



223. What happens during the process of breathing?

A. Inhaling

B. Exhaling

C. Inhaling and exhaling

D. Taking in  $CO_2$ 

Answer:

Watch Video Solution

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

A. Oxyhemoglobin

B. Haemo oxygen

C. Haemogloboxide

D. None of the above

#### Answer:



**225.** How is oxygen and carbon dioxide transported in human beings?

# A. Carbonate

# B. Bicarbonate

C. Haemocarbonate

D. All of the above

#### Answer:

Watch Video Solution

226. Which gas is released when a baker prepares a dough

by mixing yeast in it?

A. Carbon monoxide

B. Carbon dioxide

C. Oxygen

D. Nitrogen dioxide

#### Answer:

**Vatch Video Solution** 

**227.** How do yeast cells convert glucose solution to  $CO_2$  and ethyl alcohol ?

A. Methanol

B. Ethanol

C. Acetic acid

D. Nitric acid

# Answer: Watch Video Solution

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

A. Fermentation

**B. Distillation** 

C. Carboxylation

D. Nitrification





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

A. destructive distillation

**B.** Fractional distillation

C. Fermentation

D. Decantation

#### Answer:



**230.** Ethanol boils at a lower temperature of......

A. about $60^\circ\,$  C

B. About  $65^\circ\,$  C

C. About  $70^{\,\circ}\,C$ 

D. About $75^{\,\circ}\,C$ 

#### Answer:

Watch Video Solution

**231.** Identify the scientist. " Respiration was a process like combustion"

A. joseph Priestley

B. Jan Ingenhousz

C. Engleman

D. Lavoisier

#### Answer:

**Watch Video Solution** 

# **232.** Read the following table answer the following questions.

ORGANISM	ORGAN	PROCESS
1. Amoeba / Hydra	-	Diffusion
2. Insects	Trachea	Tracheal
3. Fish	, Gills	Branchial
4. Frog	Skin	Cutaneouş

Skin is the respiratory organ in which organisms?

A. Tracheal respiration

- **B.** Bronchial respiration
- C. Cutaneous respiration
- D. Pulmonary respiration

#### **Answer:**

**Watch Video Solution** 

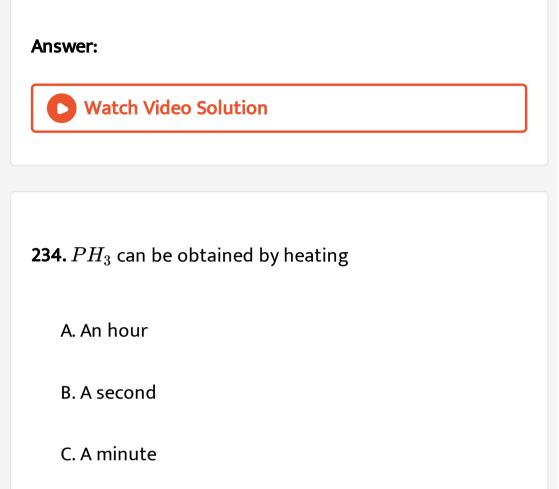
233. In plants gaseous exchange occurs through ?

A. Stomata

B. Root

C. Air spaces

D. Guard cells



D. Two hours



235. The blue dye Diazine green turns to which colour

when the supply of oxygen around it is short ?

A. Red

B. Pink

C. Yellow

D. Black

Answer:



236. After undergoing strenuous exercise we feel pain in

muscles, does adequate oxygen reach the muscles ?

A. Oxygen debt

B.  $CO_2$  debt

C. Nitrogen debt

D. All of the above

#### Answer:

Watch Video Solution

237. Wild yeasts are normally found growing on the skins

of fruits like

A. Grapes

**B.** Apples

C. Banana

D. Grapes and apples

#### Answer:

Watch Video Solution

# 238. What are the sites of cellular respiration ?

A. Cytoplasm

B. Mitochondria

C. Cytoplasm, mitochondria

D. Mitochondria, ribosomes



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

A. Three molecules of pyruvic acid

B. Two molecules of pyruvic acid

 $\mathsf{C}. CO_2$  and  $H_2O$ 

D.  $CO_2$  and energy



**240.** These organism obtain oxygen and expel carbon dioxide directly from the body by the process of diffusion

A. Amoeba

B. Hydra

C. Planarians

D. All of the above

## Answer:

Watch Video Solution

241. The amount of oxygen required for healthy growth of

plants and animals in water is

# A. Mangrove

B. Fern

C. Orchids

D. Ornamental

# Answer:

Watch Video Solution

242. Write the adaptations seen in plants living in water

logged conditions.

A. Much larger air spaces in stem

B. Hollow stem

C. Much larger air space and hallow stem

D. None of the above

#### Answer:

Watch Video Solution

243. Respiration is a catabolic process because of

A. Anabolic process

B. Catabolic process

C. Fermentation process

D. None of the above



**244.** In most plants during night time the rate of this is higher than other processes

A. Photosynthesis

**B.** Respiration

C. Transport

D. Transpiration



245. Alveoli occurs in

A. Kidney

B. Lungs

C. Blood

D. Liver

Answer:

**Watch Video Solution** 

246. In which part of the respiratory system of man, you

can observe the 'C' shaped cartilagenous rings ?

A. Larynx

B. Pharynx

C. Trachea

D. Glottis

Answer:

Watch Video Solution

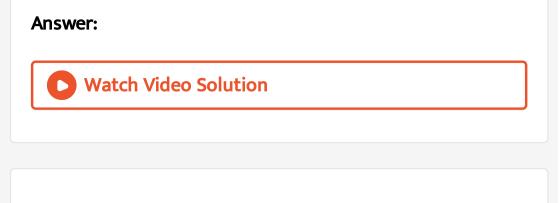
247. In earthworm hameoglobin is present in

A. Blood

B. Plasma

C. Lymph

D. All of the above



248. Most animals that live in deep oceanic waters are :

A. Terrestrial animals

B. Amphibious animals

C. Aquatic animals

D. Dlurnal animals



249. Which of the following group constitute the right pathway of gases in the respiratory system ? A. Nostrils  $\rightarrow$  Nasal cavity  $\rightarrow$  Larynx  $\rightarrow$  Pharynx  $\rightarrow$ Bronchus  $\rightarrow$  Trachea  $\rightarrow$  Bronchioles  $\rightarrow$  Alveolus  $\rightarrow$ Blood B.Nostrils  $\rightarrow$  Nasal cavity  $\rightarrow$  Pharynx  $\rightarrow$  Larynx  $\rightarrow$ Trachea  $\rightarrow$  Bronchus  $\rightarrow$  Bronchioles  $\rightarrow$  Alveolus  $\rightarrow$ Blood

A. Pharynx

B. Larynx

C. Nasal cavity

D. Palate



# **250.** Special sound producing organ in birds is

A. Vocal cords

- B. Cartilaginous rings
- C. Dust
- D. All of the above



251. I am a respiratory gas. I can turn the lime water milky.

Who am I?

A. Oxygen

B. Carbon dioxide

C. Nitrogen

D. Water vapour

#### Answer:

Watch Video Solution

252. In respiration, pyruvic acid is

A. Cytoplasm

B. Chloroplast

C. Mitochondria

D. Golgibody

#### Answer:



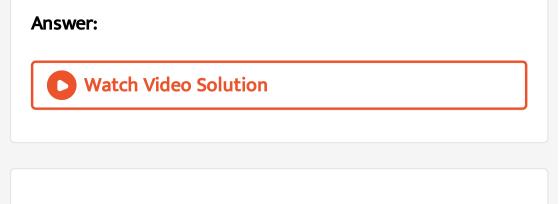
253. A long day plant is

A. Water vapour

B. Oxygen

C. Carbon dioxide

D. All of the above



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

A. 400 ml

B. 1200 ml

C. 5800 ml

D. 500 ml



255. What has raised the percentage of carbon dioxide in

exhaled air?

A. 0.0004

B. 5.0E-5

C. 0.04

D. 0.05

Answer:

Watch Video Solution

256. What are the end products of fermentation ?

A. Ethanol

 $\mathsf{B.}\,CO_2$ 

C. Energy

D. All of the above

#### **Answer:**

**Watch Video Solution** 

257. The involuntary actions like respiration is under the

control of .....(1) a part of .....system (2).

A. Lungs

B. Cerebrum

C. Medulla oblongata

D. Cerebellum

#### Answer:



258. Aerobic respiration is more advantageous because it

A. Yields less energy

B. Occurs in absence of oxygen

C. Yields more energy

D. Causes incomplete breakdown of organic molecules



**259.** The mechanism of breakdown of food materials within the cells to release energy is called

A. Expiration

**B.** Inspiration

C. Cellular respirations

D. Anerobic respiration



**260.** How does respiration takes place in plants where roots are present in wet places?

A. Light

B. Chlorophyll

C. Optimum temperature

D. Moisture

# Answer:

Watch Video Solution

**261.** Which of the following is not possible in animals?

A. Photosynthesis

**B.** Respiration

C. Reproduction

D. Digestion

#### Answer:

Watch Video Solution

**262.** The carboxylic acid group attached to porphyrin of heme in blood is

A. Lactic acid

B. Oxalo acetic acid

C. Citric acid

D. Pyruvic acid

#### Answer:

**Watch Video Solution** 

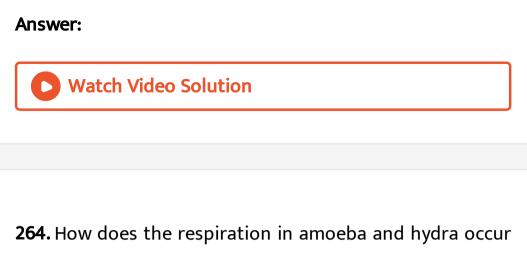
263. Glucose + ATP→Glucose6 - phosphate + ADP The enzyme which catalyses the above reaction belongs to this class

A. 2

B. 3

C. 4

D. 5



through diffusion ?

A. Osmosis

**B. Diffusion** 

C. Expiration

D. Inspiration



265. Skin has no respiratory role in

A. Earthworms

B. Snake

C. Salamander

D. Frog

Answer:

**Watch Video Solution** 

266. Collect information about cutaneous respiration in

frog. Prepare a note and explain them in your classroom.

A. Cockroach

B. Salamander

C. Sparrow

D. Snake

#### Answer:



# 267. Amphibious animal

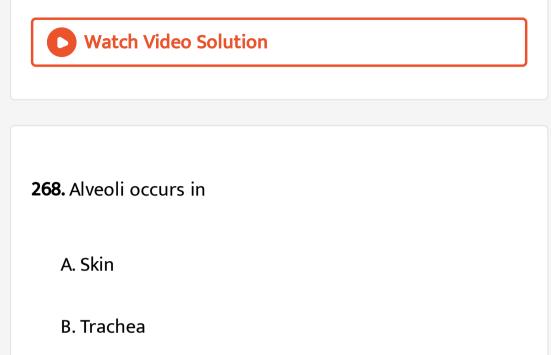
# A. Leech

B. Earthworm

C. Crab

# D. Frog

#### Answer:



C. Lungs

D. Gills



269. The structure that acts as lid over glottis

A. Epiglottis

B. Gill lamella

C. Pharynx

D. Larynx

**Answer:** 



270. Arrange the following in order

(1) Pharynx

(2) Larynx

(3) Alvelous

(4) Bronchus.

A. A part of trachea

B. A part of lung

C. A part of bronchiole

D. An upper part of tracheoles

#### Answer:

Watch Video Solution

271. The shape of a liquid depends on the shape of -

B. O

C. J

D. C

#### Answer:

**O** Watch Video Solution

272. The rate of respiration is measured by

A. 20 times

B. 32 times

C. 40 times

D. 25 times

# **Answer:** Watch Video Solution 273. Common passage for food and air is A. Pharynx B. Larynx C. trachea D. Glottis



274. Why Diazene Green solution is added to the Glucose

solution in anaerobic respiration experiment ?

A. Glycolysis does not take place

B. Water molecule is split

C.  $0_2$  acts as final electron acceptor

D. Ethyl alcohol is the common end product

#### Answer:

Watch Video Solution

275. Conversion of glycogen to glucose is stimulated by

A. 2 molecules of ATP

- B. 36 molecule of ATP
- C. 4 molecules of ATP
- D. 38 molecules of ATP

#### Answer:

Watch Video Solution

# 276. What are the components present in exhaled air ?

A.  $CO_2, 0_2$ 

- B. Water vapour
- C.  $O_2$ , water vapour
- D.  $CO_2$ , water vapor

#### Answer:



**277.** What happens to plant if the rate of respiration becomes more than the rate of photosynthesis ?

A. Live long but can't store carbohydrates

B. Die

- C. Plants grow rapidly
- D. Growth reduces and die due to hunger



278. Mangrove trees respire with their \_\_\_\_\_

A. Seedless plants

B. Mangrove plants

C. Glincidia plants

D. Monocot plants

Answer:



**279.** Read below sentence. Identify in which part it is wrong. Expain with suitable word.

Unicellular like amoeba transport of substances takes place by mens of Brownian movements.

A. No mistake

B. Cytostome

C. Paramecium

D. Respiration

Answer:

Watch Video Solution

280. How does gaseous exchange occur in lungs?

A. i , ii, iii, iv

B. I, ii, iv, iii

C. I, iii, ii, iv

D. li, iii, iv, i

#### Answer:

Watch Video Solution

281. Energy is stored in

A. nucleus

B. Ribosomes

C. Mitochondria

D. Cell wall

# Answer: Natch Video Solution 282. What is the fate of pyruvate in the absence of oxygen in animals ? A. water

B. Lactic acid

 $\mathsf{C}.\,CO_2$ 

D. Both B and C are true



283. Contraction of diaphragm

A. dome shaped

**B.** Flattened

C. Normal

D. L shaped

Answer:

**Watch Video Solution** 

284. Volume of air remaining in the lungs even after a

forcible expiration is

A. residual volume

B. Vital capacity

C. Tidal volume

D. Aspiratory volume

## Answer:

**Watch Video Solution** 

**285.** The exchange of gases in the alveoli of the lungs takes place by

A. simple diffusion

**B. Active diffusion** 

C. Passive transport

D. Osmosis

## Answer:



286. One of the following cells cannot respire

A. epidermal

**B.** Intestinal

C. RBC

D. WBC



# 287. What is anaerobic respiration ?

A. 8

B. 4

C. 3

D. 2

### **Answer:**



288. The body compensates low oxygen availability at high

altitude by

A. High alveolar capacity

- B. More number of RBC
- C. Hb curve shifts towards right
- D. All of the above

## Answer:

Watch Video Solution

289. The total number of alveoli present in both the lungs

of man is

A.  $10m^3$ 

 $\mathsf{B}.\,100m^3$ 

 $\mathsf{C}.\,150m^2$ 

D.  $200m^2$ 

#### Answer:

Watch Video Solution

# 290. Respiration is controlled by

A. Lungs

B. Body surface

C. Buccal cavity

D. None of these



**291.** Which of the following is not a structure of respiratory system?

A. Pharynx

B. Trachea

C. Bronchi

D. Hyoid

Answer:

Watch Video Solution

**292.** From Nasal cavity the air goes into pharynx After pharynx the track is divided into passage Those are

- (1) Stomach, duodenum
- (2) Trachea, digestive canal
- (3) Larynx, Epiglottis
  - A. Pharynx
  - B. Trachea
  - C. Bronchi
  - D. Alveoli



**293.** In a normal healthy individual, the volume of air remaining in the lungs even after forcible expiration is about

A. 5800 ml

B. 4600ml

C. 1200ml

D. 500 ml

Answer:



294. Lactic acid used in

A. Cytoplasm

B. Chloroplast

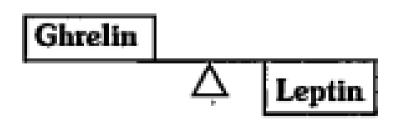
C. Mitochondria

D. Golgi body

# Answer:

Watch Video Solution

**295.** Observe the diagram.



A. A-swallowing, B-breathing

B. A- swallowing, B- peristalsis

C. A- breathing, B- swallowing

D. A- peristalsis, B- breathing

## Answer:

Watch Video Solution

296. 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:



297. What is the percentage of oxygen in atmosphere ?

A. 0.18

B. 0.16

C. 0.79

D. 0.21



# **Medicine Oriented Material**

1. Respiration is a catabolic process because of

A. Anabolic process

**B.** Catabolic process

C. Chemical process

D. All of the above

Answer:

Watch Video Solution

2. During inhalation diaphragm

A. Dome shaped

B. Flattened

C. normal

D. L shaped

Answer:

**Watch Video Solution** 

**3.** In a normal healthy individual, the volume of air remaining in the lungs even after forcible expiration is about

A. Residual volume

B. Vital capacity

C. Tidal volume

D. Aspiratory volume

## Answer:

Watch Video Solution

**4.** The exchange of gases in the alveoli of the lungs takes

place by

A. Simple diffusion

B. Active diffusion

C. Passive transport

D. Osmosis

## Answer:

Watch Video Solution

# 5. One of the following cells cannot respire

A. Epidermal

**B.** Intestinal

C. RBC

D. WBC



- A. Blood plasma
- B. RBC
- C. WBC
- D. Blood platelets



7. Respiratory pigment in molluscs is

A. Glycera

B. Serpula

C. Nereis

D. All of these

Answer:



**8.** What are the differences between aerobic and anaerobic respiration? Name some organisms that use the anaerobic mode of respiration.

A. 8

B. 4

C. 3

D. 2

Answer:

Watch Video Solution

9. Why is human life impossible at higher altitude without

a supplementary supply of oxygen?

A. High alveolar capacity

B. More number of RBC

C. Hb curve shifts towards right

D. All of the above

## Answer:

Watch Video Solution

# 10. Alveoli increase surface area by-

A. 10  $m^2$ 

B. 100  $m^2$ 

C. 150  $m^2$ 

D. 200  $m^2$ 



11. How does the respiration in amoeba and hydra occur

through diffusion ?

A. Lungs

B. Body surface

C. Buccal cavity

D. None of these



12. Trachea is double in -

A. Echidna

**B.** Penguin

C. Whale

D. Dolphin

Answer:

**Watch Video Solution** 

**13.** Higher respiratory quotient is in which among the following?

A. Amount of  $CO_2$  produced to oxygen absorbed

B.  $CO_2$  released

C.  $O_2$  absorbed

D. Amount of ATP used to burn a substance

## Answer:

**Watch Video Solution** 

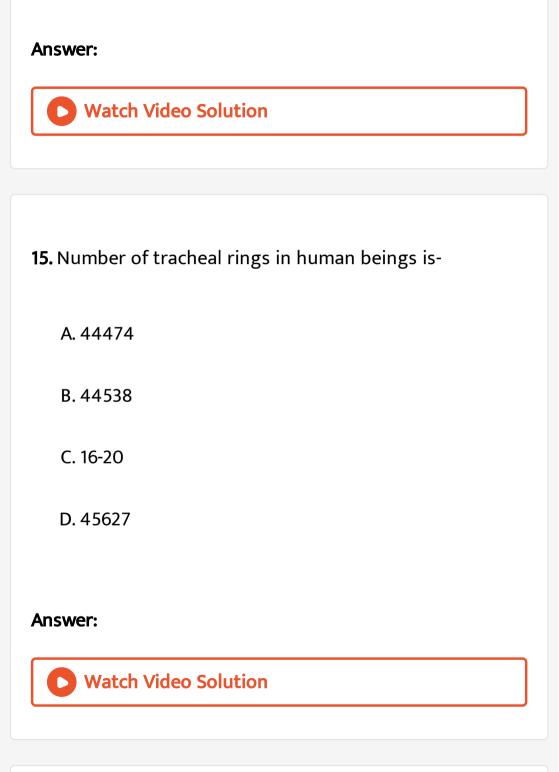
14. Apnoea is-

A. Absence of breathing

B. Decreased ventilation

C. Increased ventilation

D. Labored breathing



16. What % of oxygen is supplied by Hb-

A. 92

B. 97

C. 23

D. 73

#### **Answer:**



17. Which of the following has smaller diameter?

A. Right primary bronchus

B. Left primary bronchus

C. Trachea

D. Respiratory bronchiole

# Answer:

Watch Video Solution

**18.** Which of the following statements regarding metabolic pathways is incorrect?

A. Lactic acid

B. Citric acid

C. Ornithine cycle

D. Acetyl Co-A

# Answer:



**19.** Different substrates get oxidised during respiration. How does respiratory quotient (RQ). indicate which type of substrate (i.e) carbohydrate, fat or protein is getting oxidised ?

RQ = A/B. What do A & B stand for ?

What type of substrates have RQ of 1, < 1, > 1?

- A. 1
- $\mathsf{B.}\ <1$
- $\mathsf{C.} > 1$

D. Infinity

## Answer:



20. What is vital capacity of our lungs?

A. 3500 ml

B. 5800 ml

C. 500 ml

D. 1200 ml



21. Tissue respiration is a process by which -

A. Carbohydrate is synthesized

B. Proteins are broken down

C. Fat molecules are metabolized

D. Energy is liberated

**Answer:** 

Watch Video Solution

22. The affinity of haemoglobin for oxygen increases due

A. 2 times

B. 20 times

C. 200 times

D. 1000 times

## Answer:

Watch Video Solution

23. Stage when lung is collapsed is-

A. Atelectasis

B. Polio myelitis

C. Asthma

D. Epistaxis

## Answer:



24. Which is soluble in water :

A.  $SO_3$ 

 $\mathsf{B.}\,SO_2$ 

C. normal

D. CO



25. Contraction of diaphragm

A. Dome shaped

B. Flat

C. Spherical

D. Cone shape

**Answer:** 



**26.** Which of the following is not a structure of respiratory

system?

A. Pharynx

B. Trachea

C. Bronchi

D. Hyoid

Answer:

Watch Video Solution

**27.** Fill in the blanks: BCG vaccine is used to cure \_\_\_\_\_

respiratory disease.

Watch Video Solution

**28.** The exchange of gases in the alveoli of the lungs takes

place by

<b>Watch Video Solution</b>					
<b>29.</b> Fill in the blanks: Expiration involves relaxation of					
and					
Watch Video Solution					
<b>30.</b> Fill in the blanks: Adam's apple corresponds to					
part of respiratory system.					
r =,					
<b>Watch Video Solution</b>					

**31.** Fill in the blanks: Residual air can be traced in

\_\_\_\_\_

<b>Watch Video Solution</b>
<b>32.</b> Fill in the blanks: Amount of oxygen present in 1gm of Hb is
Watch Video Solution
<b>33.</b> Fill in the blanks: Hamburger phenomenon is associated with transport of,
<b>Vatch Video Solution</b>

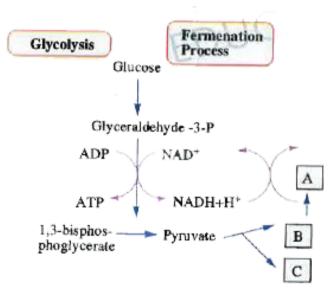
34.	Fill	in	the	blanks:	Iron	free	compound	of	Hb	is
-----	------	----	-----	---------	------	------	----------	----	----	----

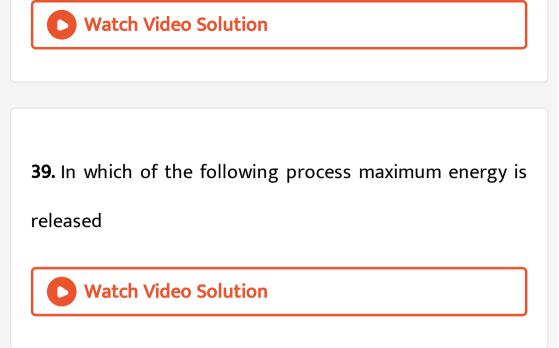
<b>Watch Video Solution</b>					
<b>35.</b> Fill in the blanks: The number of molecules of oxygen carried by one molecule of Hb is					
Watch Video Solution					
<b>36.</b> Between breaths, the intrapleural pressure is approximately mmHg less than atmospheric					
pressure.					
Watch Video Solution					

37. How does gaseous exchange occur in lungs?



**38.** Choose the correct combination of labelling the molecules involved in the pathway of anaerobic respiration in yeast.





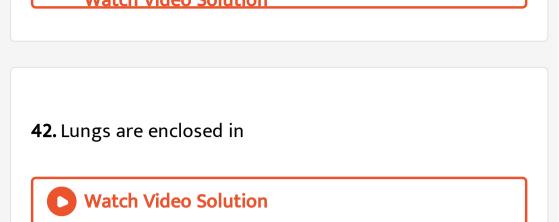
40. Fill in the blanks: When temperature decreases, the

oxy Hb curve will become \_\_\_\_\_.



**41.** Hamburger's phenomenon is also known as





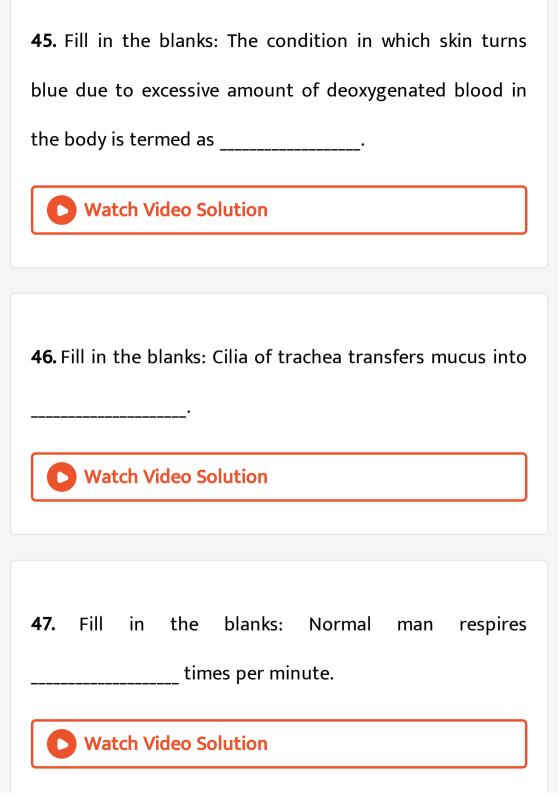
43. Define respiratory quotient (RQ). What is its value for

fats ?



44. Pharynx opens into trachea through





48.	Fill	in	the	blanks:	The	function	of	tracheal	hair	is	to
-----	------	----	-----	---------	-----	----------	----	----------	------	----	----

pass the \_\_\_\_\_ out.

Watch	Video	Solution	

49. Fill in the blanks: Expiration involves relaxation of

and	Ι

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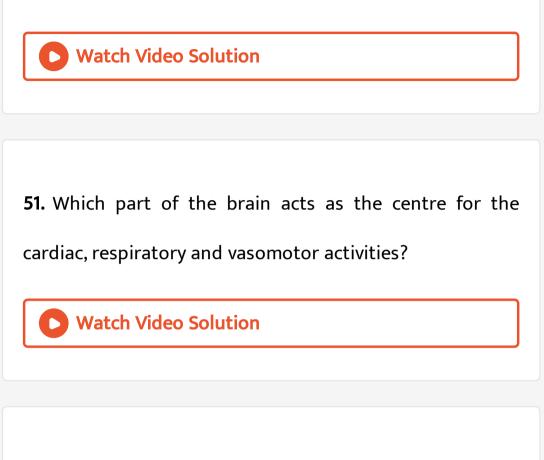
50. Which of the following characters are seen in sharks?

(i) Body is streamlined and mouth is terminal .

(ii) Gill slits are separte not covered by operculum .

(iii) Skin is tough ,containig minute placoid scales .

(iv) many of them are oviparous .



52. Volume of air either inspired or expired during normal

respiration is



**53.** The state, during which the respiratory centre is inhibited, is termed as

|--|

**54.** An asthmatic patient has difficulty in breathing. Which of the following would you administer to the patient? Why?



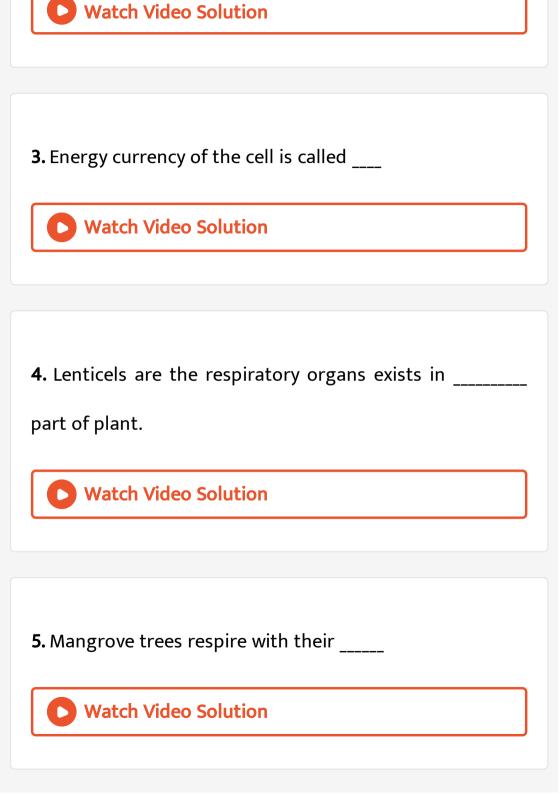
**55.** How are the lungs designed in human beings to maximise the area for exchange of gases?



<b>56.</b> Fill in the blanks: The	_ cavities are
closed separate cavities within the thorax.	
<b>Watch Video Solution</b>	
Improve Your Learning Fill In The Blanks	
<b>1.</b> Exhaled air contains and	
Watch Video Solution	
<b>2.</b> A flap like muscular valve controls moveme	ent of air and

food is \_\_\_\_





1. We will find vocal cords in

A. larynx

B. pharynx

C. nasal cavity

D. trachea

# Answer:



2. Cluster of air sacs in lungs are called

A. alveoli

B. bronchi

C. bronchioles

D. air spaces

# Answer:

Watch Video Solution

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 & ii

C. ii & iii

D. iv

Answer:



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:

Watch Video Solution

5. Energy is stored in

A. nucleus

B. mitochondria

C. ribosomes

D. cell wall

# Answer:

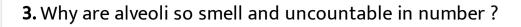


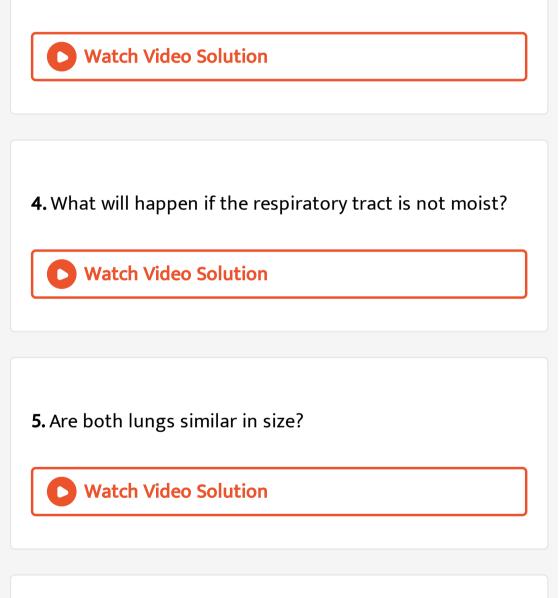
# **Think And Discuss**

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

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2. Are both lungs similar in size ?





6. Why alveoli are so small and uncountable in number?



**Improve Your Learning** 

1. Distinguish between Inspiration and Expiration

Watch Video Solution

2. Distinguish between Aerobic and Anaerobic respiration



3. Distinguish between Respiration and Combustion





4. Distinguish between Photosynthesis and Respiration

|--|

5. State two similarities between aerobic and anaerobic

respiration.



6. Food sometimes enters the wind pipe and causes

choking. How does it happen?



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

Watch Video Solution

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

?



9. Balu said that , "Plants perform Photosynthesis during

day time. They respire during night time ".

Do you agree with Balu ? Why ? Why not ?

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10. What do the mountaineers and deep sea divers carry

on their backs ?

Watch Video Solution

11. How are alveoli designed to maximise the exchange of

gases ?

**12.** 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?



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



Watch Video Colution

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

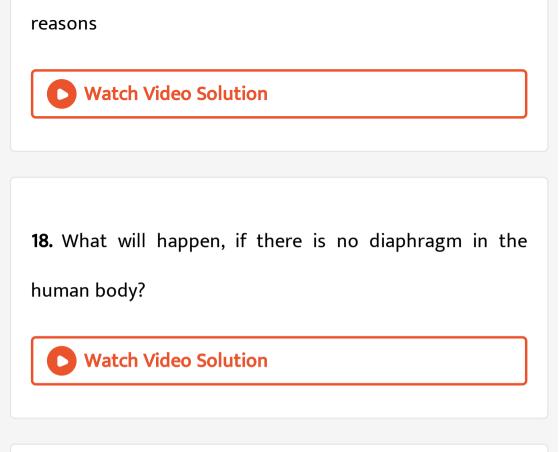
**15.** Explain the mechanism of gaseous exchange at bronchiole level.

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**16.** After a vigorous exercise or work we feel pain In muscles. What is the relationship between pain and respiration



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



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

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

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**21.** What are your observations in combustion of sugar

activity?



22. Collect information about cutaneous respiration in

frog. Prepare a note and explain them in your classroom.

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

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24. What is the pathway taken by air in the respiratory

system? Illustrate with a labeled diagram.



25. Draw a block diagram showing events in respiration .

Write what you understood about cellular respiration :



26. How do you appreciate the mechanism of respiration

in our body?

27. Prepare an article on anaerobic respiration to present

school symposium

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28. Prepare a cartoon on discussion between haemoglobin

and chlorophyll about respiration.

29. Distinguish between

inspiration and expiration

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30. Distinguish between

Aerobic respiration and Anaerobic respiration

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31. Distinguish between

**Respiration and Combustion** 

32. Distinguish between

photosynthesis and respiration

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**33.** State two similarities between aerobic and anaerobic respiration.

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



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

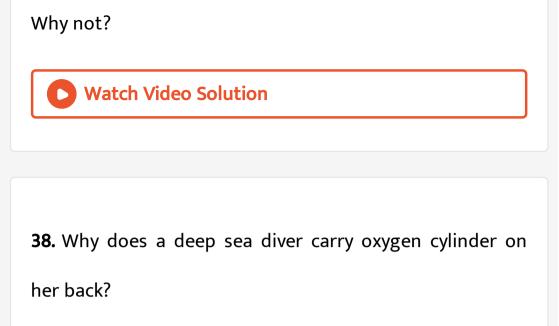


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**36.** Air leaves the tiny sacs in the lungs to pass into capillaries. What modification is needed in the statement?



**37.** Plants photosynthesize during daytime and respire during the night. Do you agree to this statement? Why?



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39. How are alveoli designed to maximize the exchange of

gases?

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

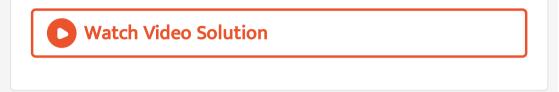
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**41.** What is the role of epiglottis and diaphragm in respiration?

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42. How gases exchange takes place at blood level?

**43.** Explain the mechanism of gaseous exchange at branchiole level.



**44.** After a vigorous excercise or work we feel pain muscles. What is the relationship between pain and respiration?

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**45.** Raju said stem also respire along with leaves in plants.

Can you support this statement? Give your reasons.

**46.** What will happen if diaphragm is not there in the body?

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**47.** If you have a chance to meet pulmonologist what questions are you going to clarify about pulmonary respiration?



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



49. What are your observations in combustion of sugar

activity?

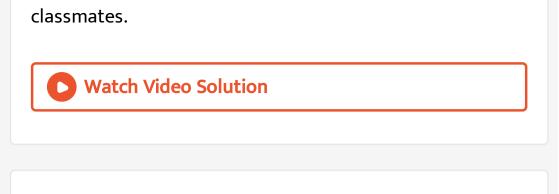


50. Collect information about cutaneous respiration in

frog. Prepare a note and explain them in your classroom.



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



52. What is the pathway taken by air in the respiratory

system? Illustrate with a labeled diagram.

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53. Draw a block diagram showing events in respiration.

Write what you understood about cellular respiration.



54. How you appreciate the mechanism of respiration in

our body?



55. Prepare an article on anaerobic respiration to present

in school

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56. Prepare a cartoon on discussion between haemoglobin

and chlorophyll about respiration.



<b>1.</b> Exhaled air contains and	
<b>Vatch Video Solution</b>	]

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

food is \_\_\_\_\_.

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3. Energy currency of the cell is

**4.** Lenticels are the respiratory organs exists in part of plant. Watch Video Solution 5. Mangroove trees respire with their . Watch Video Solution

**Choose The Correct Answer** 

1. We will find vocal cords in

A. 1. Larynx

B. 2. Pharynx

C. 3. Nasal cavity

D. 4. Trachea

# Answer:



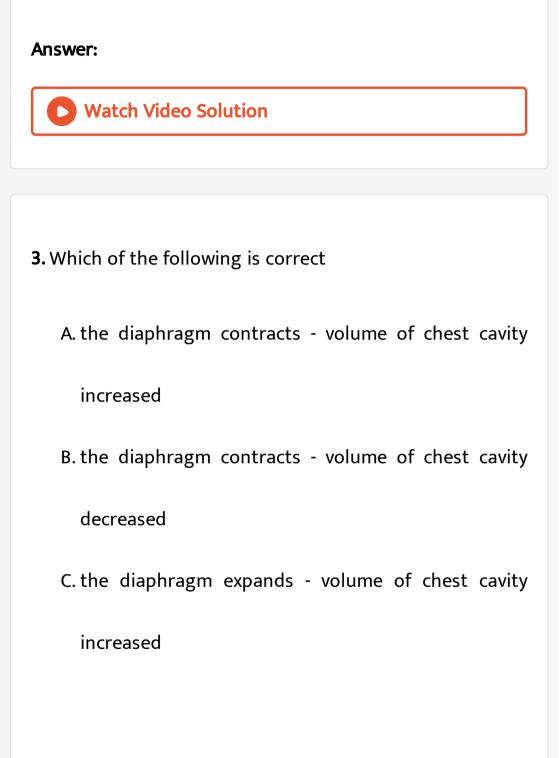
2. Cluster of air sacs in lungs are called

A. alveolus

B. bronchi

C. braonchioles

D. air spaces



D. the diaphragm expands - volume of chest cavity

decreased

Answer:

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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:



5. Energy is stored in

A. nucleus

B. mitochondria

C. ribosomes

D. cell wall

Answer:

