



# BIOLOGY

## BOOKS - LAKHMIR SINGH & MANJIT KAUR

### RESPIRATION IN ORGANISMS

#### Exercise

1. Name the process by which energy is released from the digestive food.

A. Breathing

B. Respiration

C. Ingestion

D. Excretion

**Answer: B**



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**2. Name the two gases which are exchanged during respiration.**

A. Oxygen

B. Carbondioxide

C. Nitrogen

D. Both A and B

**Answer: D**



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**3. State whether the following statements are true or false :**

Respiration is a type of combustion at ordinary temperature.

A. True

B. False

C. Data insufficient

D. None of the above

**Answer: B**



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4. State whether the following statements are true or false :

Oxygen is released during the process of respiration.



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5. State whether the following statements are true or false :

Energy can be released in the cells without oxygen.





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6. During heavy exercise the breathing rate of a person slows down. (T/F)



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7. The size of the chest cavity increases during inhalation. (T/F)



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**8.** State whether the following statements are true or false :

Frogs breathe through lungs as well as skin.



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**9.** State whether the following statements are true or false :

Fish has lungs for breathing.



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**10.** State whether the following statements are true or false :

whales and dolphins live in water and breathe through gills.



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**11.** State whether the following statements are true or false :

Insects breathe through spiracles and tracheae.





12. Name an animal in which exchange of gases during breathing takes place through its thin and moist skin. ?

A. Frog

B. Earthworm

C. Whale

D. Fish

**Answer: B**



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**13.** Name one animal which can breathe through lungs as well as skin

A. Frog

B. Earthworm

C. Whale

D. Cockroach

**Answer: A**



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**14.** Name two animals which breathe through gills



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**15.** Name one animal which gets oxygen for breathing and respiration through tiny holes (spiracles) in its body which are connected to a network of thin air-tubes (tracheae).



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**16.** Name one organism which can live without oxygen.



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**17.** Name one anaerobe (anaerobic organisms).



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**18.** What type of respiration usually takes place in yeast ?



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**19.** Name the substance whose build up in the muscles during vigorous physical exercise may cause cramps.



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**20.** Name the single-celled organism which is used to make wine and beer by the process of anaerobic respiration.



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**21.** What happens to your breathing rate when you :

Exercise ?



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**22.** What happens to your breathing rate when you :  
go to sleep ?



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**23.** Name the skeletal structure surrounding the chest cavity.

A. Rib cage

B. Spinal cord

C. Bones

D. Vertebral column

**Answer: A**



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**24.** Name the muscular floor of the chest cavity.

A. Rib cage

B. Lungs

C. Trachea



D. Diaphragm

**Answer: D**



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**25.** Which contains more carbon dioxide :  
inhaled air or exhaled air ?



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**26.** Which contains less oxygen : inhaled air or exhaled air ?



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**27.** What are the percentages of oxygen and carbon dioxide :  
in inhaled air ?



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**28.** What are the percentages of oxygen and carbon dioxide :  
in exhaled air ?



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**29.** Name the breathing organs in the human body.



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**30.** In the lungs :

(a) what substance is taken into the body ?

(b) what substance is removed from the body

?



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**31.** In the lungs :

(a) what substance is taken into the body ?

(b) what substance is removed from the body

?

A. Oxygen, Carbondioxide

B. Carbondioxide, Oxygen

C. Nitrogen, Oxygen

D. Hydrogen, Carbondioxide

**Answer: A**



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**32. Which gases are exchanged in your lungs ?**



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**33.** Where does the blood absorb oxygen in the human body ?



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**34.** Name the red pigment in blood which carries oxygen in the human body ?



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**35.** Name the opening in our body through which we inhale air.



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**36.** Name one bad habit which can cause lung cancer.



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**37.** Which group of animals have spiracles and tracheae for breathing and respiration ?



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**38.** What is the average breathing rate of a human adult at rest ?



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**39.** Name the air-tubes of insects.





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**40.** Name the small openings (holes) on the sides of the body of an insect.



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**41.** Name the tiny pores on the surface of leaves of a plant through which gas exchange occurs.



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**42.** Name any two parts of plant through which exchange of gases takes place during respiration.



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**43.** Which of the two can respire independently : plant parts or animal parts ?



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**44.** From where do roots absorb air needed for respiration ?



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**45.** State any one use of yeast.



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**46.** Fill in the following blanks with suitable words:

The process of respiration is the reverse of

.....



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**47.** Fill in the following blanks with suitable words:

Food can also be broken down without using

.....



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**48.** Fill in the following blanks with suitable words:

Anaerobic respiration in muscles occurs if there is no ..... Available.



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**49.** Fill in the following blanks with suitable words:

Anaerobic respiration by yeast converts

glucose into ..... which is used in making wine or beer.

- A. Lactic acid
- B. Alcohol
- C. Glycogen
- D. None of these

**Answer: B**



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**50.** Fill in the following blanks with suitable words:

Yeast is a ..... celled organism.



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**51.** Fill in the following blanks with suitable words:

If a person is doing exercise, his breathing rate  
.....



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52. Fill in the following blanks with suitable words:

Breathing involves the movement of .....

And the ..... Cage.

A. diaphragm, rib

B. rib, diaphragm

C. alveoli, rib

D. lungs, diaphragm

**Answer: A**





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**53.** Fill in the following blanks with suitable words:

When we exercise, not only do we breathe faster, we also take ..... Breaths.



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**54.** Fill in the following blanks with suitable words:

The taking in air rich in oxygen into the body is called .....



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**55.** Fill in the following blanks with suitable words:

The expelling of air rich in carbon dioxide from the body is called .....



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**56.** Fill in the following blanks with suitable words:

In human body, oxygen and carbon dioxide are exchanged in the .....



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**57.** Fill in the following blanks with suitable words:

In earthworm, exchange of gases occurs through the .....





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**58.** Fill in the following blanks with suitable words:

In fishes, exchange of gases occur through  
.....



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**59.** Fill in the following blanks with suitable words:

In insects, exchange of gases occurs through

.....

A. gills

B. skin

C. trachea

D. lungs

**Answer: C**



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**60.** Fill in the following blanks with suitable words:

Dolphins and whales breathe through .....

A. Blowholes

B. Gills

C. Trachea

D. Lungs

**Answer: A**



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**61.** Fill in the following blanks with suitable words:

In plant cells, oxygen is used to break down  
..... Into carbon dioxide and water, and release  
.....



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**62.** What is meant by respiration? Write a word equation for it. What is the main

difference between aerobic respiration and anaerobic respiration ?



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**63.** What are the two main parts in the process of respiration ?



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**64.** What type of respiration take place in the absence of oxygen ?





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**65.** What type of respiration take place in the presence of oxygen ?



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**66.** In which type of respiration, aerobic or anaerobic, more energy is released from the same amount of glucose (food) ? Why ?



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**67.** List the similarities between aerobic respiration and anaerobic respiration.



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**68.** List the differences between aerobic respiration and anaerobic respiration.



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**69.** Why does running make a man breathe faster ?



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**70.** Explain why, whenever a person needs extra energy, he breathes faster.



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71. Why does an athlete breathe faster and deeper than usual after finishing the race?



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72. Why do we usually feel hungry after a heavy physical exercise ?



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**73.** What would happen if a potted plant is over-watered for a long time ? Give reason for your answer.



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**74.** Which will turn lime water milky more appreciably : inhaled air or exhaled air ? Why ?



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**75.** Explain why ,exhaled air contains more carbon dioxide than inhaled air



**Watch Video Solution**

**76.** Explain why ,exhaled air contains less oxygen than inhaled air



**Watch Video Solution**

**77.** Explain why, exhaled air contains more water vapour than inhaled air



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**78.** Explain why, when we exhale air from our mouth on to a mirror, a patch of moisture is formed on the mirror surface?



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**79.** Why do all the organisms respire ?



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**80.** What is yeast ? What type of respiration is carried out by yeast ?



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**81.** why do mountaineers carry oxygen gas cylinders with them ?





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**82.** Why do we often sneeze when we inhale a lot of dust-laden air?



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**83.** State the harmful effects of smoking.



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**84.** Define 'breathing rate'. How does the breathing rate in children differ from that in adults



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**85.** Name the breathing organs in fish



**Watch Video Solution**

**86.** Name the breathing organs in

earthworm



**Watch Video Solution**

**87.** Name the breathing organs in

frog



**Watch Video Solution**

**88.** Name the breathing organs in

insects



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**89.** Describe the process of breathing and

respiration the following animals:

Earthworm



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**90.** Describe the process of breathing and respiration the following animals:

Frog



**Watch Video Solution**

**91.** Describe the process of breathing and respiration the following animals:

Fish



**Watch Video Solution**

**92.** Describe the process of breathing and respiration the following animals:

insects



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**93.** Describe the process of respiration :

in the leaves of a plant.



**Watch Video Solution**

**94.** Describe the process of respiration :

In the roots of a plant.



**Watch Video Solution**

**95.** What is meant by aerobic respiration ?

Explain by writing a word equation. Name one organism which normally uses aerobic respiration.



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**96.** What type of respiration takes place in human muscles during heavy physical exercise?



**Watch Video Solution**

**97.** What is meant by respiration ? Write a word equation for it. What is the main difference between aerobic respiration and anaerobic respiration ?



**Watch Video Solution**



**98.** What type of respiration usually takes place in humans?



**Watch Video Solution**

**99.** What are the main organs of respiratory system in humans?



**Watch Video Solution**

**100.** Draw a labelled diagram of human respiratory system.



**Watch Video Solution**

**101.** What is meant by 'breathing'? Describe the mechanism of breathing in humans.



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**102.** What causes 'yawning'? What are the various situations under which yawning occurs?



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**103.** What happens to the breathing rate when a person is tired, bored, feels sleepy or drowsy? How does yawning improve the situation?



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**104.** During heavy exercise, we get cramps in the legs due to the accumulation of

A. carbon dioxide

B. lactic acid

C. alcohol

D. water

**Answer: B**



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**105.** Normal range of breathing rate per minute in an average adult person at rest is

A. 44-51

B. 15 -18

C. 21 - 24

D. 30 - 33

**Answer: B**



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**106.** During inhalation, the diaphragm:

- A. moves downwards
- B. moves upwards
- C. moves towards left
- D. moves towards right

**Answer: A**



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**107.** During exhalation, the rib cage:

- A. moves upward and outwards
- B. moves downward and inwards
- C. moves from side to side
- D. does not move at all

**Answer: B**



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**108.** In cockroaches, air enters the body through:

A. lungs

B. gills

C. spiracles

D. skin

**Answer: C**



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**109.** One of the following does not have gills for breathing. This one is:



A. prawn

B. crab

C. whale

D. fish

**Answer: C**



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**110.** Which of the following is not a part of the human respiratory system?

A. lungs

B. oesophagus

C. trachea

D. diaphragm

**Answer: B**



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**111.** One of the following is not produced during the anaerobic respiration in yeast. This one is :

A. carbon dioxide

B. energy

C. lactic acid

D. alcohol

**Answer: C**



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**112.** As compared to inhaled air, the exhaled air contains more of :

A. water vapour B. oxygen C. carbon dioxide D.  
nitrogen

A. A and B

B. A and C

C. only c

D. B and C

**Answer: B**



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**113.** Which of the following has haemoglobin-containing blood ?

A. grass hopper

B. cockroach

C. goose

D. wasp

**Answer: C**



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**114.** The energy of food which we eat is released slowly inside our body by the process called :

A. transpiration

B. pollination

C. restrotation

D. respiration

**Answer: D**



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**115.** Which of the following is not a product of aerobic respiration ?

A. carbon dioxide

B. alcohol

C. energy

D. water

**Answer: B**



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**116.** yeast converts glucose into :

A. starch

B. alcohol

C. lactic acid

D. yogurt

**Answer: B**



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**117.** Which of the following are not the products of anaerobic respiration in muscles ?

A. CARBON DIOXIDE B. ENERGY C. ALCOHOL D. LACTIC ACID

A. A and B

B. B and C

C. A and C

D. B and D

**Answer: C**



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**118.** During respiration in humans, the exchange of gases takes place in :

- A. bronchi
- B. alveolic
- C. bronchioles
- D. trachea

**Answer: B**



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**119.** Which of the following does not have lungs for breathing ?

A. lizard

B. frog

C. fish

D. fox

**Answer: C**



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**120.** one of the following organisms can live without the oxygen of air. This organisms is:

A. amoeba

B. yak

C. yeast

D. leech

**Answer: C**



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**121.** When air is blown from mouth into a test - tube containing lime water, the lime water turned milky due to the presence of

A. oxygen

B. carbon dioxide

C. nitrogen

D. alcohol

**Answer: B**



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**122.** Which of the following is most likely to have a much higher breathing rate ?

A. man

B. dog

C. sparrow

D. fish

**Answer: D**



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**123.** The animal which can breathe through the lungs as well as through skin is :

A. fish

B. dolphin

C. frog

D. crocodile

**Answer: C**



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**124.** In an experiment to demonstrate the mechanism of breathing by using a bell jar, two balloons in the bell jar and a rubber sheet tied to the open end of bell jar :

What does the space in the bell jar represent ?



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**125.** In an experiment to demonstrate the mechanism of breathing by using a bell jar, two balloons in the bell jar and a rubber sheet



tied to the open end of bell jar :

What do the balloons in the bell jar represent



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**126.** In an experiment to demonstrate the mechanism of breathing by using a bell jar, two balloons in the bell jar and a rubber sheet tied to the open end of bell jar :

What does the rubber sheet tied over the open end of the bell jar represent ?



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**127.** Name the type of respiration in which the end products are :

alcohol and carbon dioxide



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**128.** Name the type of respiration in which the end products are :

carbon dioxide and water



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**129.** Name the type of respiration in which the end products are :

lactic acid



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**130.** There are three animals X, Y and Z . The animal X can stay in water as well as on land and can breathe through its moist skin as well as lungs. The animal Y always lives in water and had gills for breathing. On the other hand,

animal Z lives in soil and breathes only through its skin.

Which animal could be a fish ?



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**131.** There are three animals X, Y and Z . The animal X can stay in water as well as on land and can breathe through its moist skin as well as lungs. The animal Y always lives in water and had gills for breathing. On the other hand, animal Z lives in soil and breathes only

through its skin.

Which animal could be an earthworm



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**132.** There are three animals X, Y and Z . The animal X can stay in water as well as on land and can breathe through its moist skin as well as lungs. The animal Y always lives in water and had gills for breathing. On the other hand, animal Z lives in soil and breathes only

through its skin.

Which animal could be a frog



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**133.** There are three animals X, Y and Z . The animal X can stay in water as well as on land and can breathe through its moist skin as well as lungs. The animal Y always lives in water and had gills for breathing. On the other hand, animal Z lives in soil and breathes only through its skin.

name one animal which always lives in water  
but has no gills for breathing



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**134.** What are the products obtained In the  
anaerobic respiration :  
if it takes place in muscles ?



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**135.** What are the products obtained In the anaerobic respiration :

if it takes place in yeast ?



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**136.** Consider the following animals :

Fish, Grasshopper, Cockroach, Earthworm,

Frog, Cow, Goat, Man, Lizard, Snake

Which of these animals :

breathes only through skin ?







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**137.** Consider the following animals :

Fish, Grasshopper, Cockroach, Earthworm,

Frog, Cow, Goat, Man, Lizard, Snake

Which of these animals :

breathes through skin as well as lungs ?



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**138.** Consider the following animals :

Fish, Grasshopper, Cockroach, Earthworm,

Frog, Cow, Goat, Man, Lizard, Snake

Which of these animals :

breathe only through lungs ?



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**139.** Consider the following animals :

Fish, Grasshopper, Cockroach, Earthworm,

Frog, Cow, Goat, Man, Lizard, Snake

Which of these animals :

breathes through gills ?



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**140.** Consider the following animals :

Fish, Grasshopper, Cockroach, Earthworm,

Frog, Cow, Goat, Man, Lizard, Snake

Which of these animals :

(a) breathes only through skin?

(b) breathes through skin as well as lungs?

(c) breathes only through lungs?

(d) breathe through spiracles and trachea?

(e) breathes through gills?



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