



# ÉCOLE GLOBALE

## INTERNATIONAL GIRLS' SCHOOL

### Dehradun

## HOLIDAY HOMEWORK - CLASS VII

### BIOLOGY

#### Respiratory System Vocabulary

Instructions: Use the word bank to complete each statement about the respiratory system.

**Word Bank:** alveoli; bronchiole; carbon dioxide; diaphragm; hair; larynx; lungs; nose; oxygen; trachea

1. The \_\_\_\_\_ is the first work station in the respiratory system.
2. The \_\_\_\_\_ inside the nose catches the largest particles to prevent them getting into the lungs.
3. The \_\_\_\_\_ is also known as the vocal chords.
4. The "windpipe" is also known as the \_\_\_\_\_.
5. The one main function for the \_\_\_\_\_ is the exchange of gases in the air to bring oxygen into the body.
6. The lungs take in \_\_\_\_\_ and release \_\_\_\_\_.
7. Your \_\_\_\_\_ a muscle beneath your lungs that contracts and relaxes to help move gases into and out of your lungs.
8. Air is carried into your lungs by two short tubes called \_\_\_\_\_ at the lower end of the trachea.
9. At the end of each bronchiole are clusters of tiny, thin-walled sacs called \_\_\_\_\_.

10. Breathing occurs in a predictable series of steps. First, air flows from the \_\_\_\_\_ or \_\_\_\_\_ through the \_\_\_\_\_ (which is located at the back of the throat). Then, the air moves through the \_\_\_\_\_, a long pipe like structure, to the \_\_\_\_\_ where the air is further moved to the location where gas transfer occurs, the \_\_\_\_\_, small air sacs located in the lungs.

11. What word best describes the function of the trachea?

Pumping station

Entrance point

Muscle

Passageway

12. What is the "pipe" between the mouth and stomach called?

epiglottis

trachea

esophagus

appendix

13. The membrane on the surface of the lungs is called the

epidermis

sagittal

visceral pleura

macromolecule

14. What are the increasingly smaller airways branching off into the lungs called?

air sacs

bronchial tubes

capillaries

lungs

15. What are the bubble-shaped sacs in the lungs where gas exchange takes place called?

capillaries

bronchial tubes

alveoli

lungs

16. When a human inhales, the air pressure in the chest cavity

remains the same, allowing both pressures to be equal

increases, allowing lungs to expand

decreases, allowing outside air to flow into the lungs

there is no air pressure in your chest cavity

17. Where does the transfer of oxygen into the bloodstream take place?

In the heart

In the trachea

In the alveoli

In the nasal passages

18. How can one prevent emphysema, a well-known lung disease?

By maintaining a healthy diet

By exercising consistently

By abstaining from smoking

By taking vitamins

19. What is the function of the respiratory system?

## Photosynthesis

1. Photosynthesis means

- a. the green material in plants that traps energy from sunlight and uses it to break down water molecules into atoms of hydrogen and oxygen.
- b. in a plant, the growth tissue that produces the xylem and the phloem.
- c. the process by which green plants use chemicals from the environment and energy from the sun to make their own food.

2. Photosynthesis is an instance of

- a. homeostasis
- b. reproduction
- c. metabolism
- d. growth & development
- e. cell structure

3. The first step in photosynthesis is

- a. the absorption of light energy
- b. synthesis of water
- c. production of oxygen
- d. formation of ATP

4. In a typical plant, all of the following factors are necessary for photosynthesis EXCEPT

- a. chlorophyll
- b. light
- c. oxygen
- d. carbon dioxide

5. In photosynthesis, water undergoes \_\_\_\_\_ while carbon dioxide undergoes \_\_\_\_\_.

- a. oxidation .... reduction
- b. reduction .... oxidation
- c. no change ..... oxidation
- d. none of the above

6. Oxygen made during photosynthesis results from the

- a. absorption of light.
- b. splitting of water molecules.
- c. mitochondrial membranes.
- d. splitting of carbon dioxide molecules.

7. Many plants are excellent at photosynthesis because they

- a. have few mesophyll cells in their leaves
- b. are equipped with many leaves that have many mesophyll cells, which in turn have many chloroplasts
- c. are able to transform light energy into heat energy for cellular work
- d. can carry out photosynthesis in their roots, stems, flowers as well as their leaves
- e. produce an abundant supply of oxygen that is an important input for photosynthesis

8. What is the equation for photosynthesis?

## **NUTRITION IN ANIMALS**

1. What is nutrition?
2. Name three glands associated with the digestive system.
3. What does the inner lining of the stomach secrete?
4. Which teeth are used for chewing and grinding?
5. Which carbohydrate is not digested in humans?
6. Which part of the teeth is used for biting and cutting?
7. Which part of the teeth is used for piercing and tearing?
8. Where does complete digestion of food take place?
9. What does liver secrete?
10. Where is the bile produced? Which component of the food it helps in digestion?
11. What is expelled out of the body as faeces through the anus?
12. What does animal nutrition include?
13. What is digestion?
14. What is alimentary canal?
15. What all constitute human digestive system?
16. What is ingestion?
17. What is the role of pseudopodia in nutrition in amoeba?
18. Write two functions of tongue in humans.
19. What is the role of saliva in digestion?
20. Why do we taste food sweeter after chewing it for a longer time?
21. What is the role of HCl in the stomach?
22. Your stomach contains hydrochloric acid, but you don't experience any burning sensation. Why?
23. What is the role of villi in the intestine?
24. What is meant by rumen and caecum in ruminants?
25. How does amoeba ingest its food and where is it digested?
26. What is liver?
27. What is a gall bladder? What is its role?

28. What happens during assimilation of food in man?
29. Why do we get instant energy from glucose?
30. What are villi? What are their location and function?
31. Name the type of carbohydrate that can be digested by ruminants but not humans. Give the reason also.
32. Why do we start hiccupping or get choking sensation while eating food?
33. What is meant by assimilation?
34. No digestion occurs in large intestine yet its role is important. Justify the statement.
35. How do you differentiate between absorption and assimilation?
36. What is egestion?
37. What are the products of digestion of carbohydrates, proteins and fats?
38. What are ruminants?
39. What is cud?
40. What helps amoeba to capture its food?
41. Write one similarity and one difference between the nutrition in amoeba and human beings.
42. Which part of the digestive canal is involved in:
  - A. absorption of food
  - B. chewing of food
  - C. killing of micro organisms
  - D. complete digestion of food
  - E. formation of faeces
43. What is stomach and how does it work?

Long answer type questions

1. Briefly describe the process of nutrition in amoeba
2. Mention the various steps involved in the process of nutrition
3. Briefly explain the process of digestion in ruminants
4. Draw a labeled diagram of human digestive system.

## CIRCULATORY SYSTEM

1. Describe the four steps in which blood flows through the heart. Draw a picture showing the path of blood from when it enters the right atrium until it leaves the left ventricle.
2. When you hear your heart beat, what exactly are you hearing?
3. Write the components of blood and their functions.

Complete each statement using a term or terms from the list below. Write your answers in the spaces provided. Some words may be used more than once.

*heart circulation oxygen veins food capillaries arteries blood vessel waste materials blood*

1. The transport of materials in living things is called \_\_\_\_\_.
2. In humans, circulation is carried out by the liquid called \_\_\_\_\_.
3. Blood is pumped by the \_\_\_\_\_.
4. Blood brings to cells things like \_\_\_\_\_ and \_\_\_\_\_.
5. Blood picks up \_\_\_\_\_ from the cells.
6. Any tube that carries blood is called a(n) \_\_\_\_\_.
7. The three kinds of blood vessels are \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
8. Blood is carried away from the heart by \_\_\_\_\_.
9. Blood is carried back to the heart by \_\_\_\_\_.
10. Arteries and veins are connected by tiny blood vessels called \_\_\_\_\_.

TRUE or FALSE – In the space, write a 'T' or 'F'

1. Circulation is the transport of materials in living things.
2. Life stops when circulation stops.
3. Blood is pumped by the brain.
4. Blood circulates through the body only a few times a day.



5. Arteries carry blood away from the heart.
6. Arteries transport carbon dioxide to the cells.
7. Veins carry blood away from the heart.
8. Veins pick up waste materials from the cells.
9. Capillaries connect arteries and veins.
10. Capillaries are the largest blood vessels.

Answer the following

1. When you cut yourself, which part of the blood helps you to stop bleeding?
2. White blood cells also come to the area of a cut. Why?
3. Take an educated guess at this one – What happens to the number of white blood cells when germs are in the body?

Answer the following questions about red blood cells.

1. Oxygen is \_\_\_\_\_.(needed by cells OR a cell waste)
2. Which blood cells pick up and carry oxygen? \_\_\_\_\_  
(red blood cells OR white blood cells OR platelets)
3. What substance in red blood cells joins with oxygen? \_\_\_\_\_
4. Where does the blood pick up this oxygen?  
a) in the heart b) in the arteries and veins c) in the lungs
5. What gives blood its color? \_\_\_\_\_ .