

## Gaseous Exchange

Sr	Questions	Answers Choice
1	Which of the following adaptations maximizes the efficiency of gaseous exchange in plant leaves?	A. Thick cuticle layer B. Compactly arranged mesophyll cells <b>C. Large surface area provided by numerous stomata</b> D. Reduced intercellular air spaces
2	Once inside the leaf, where do gases like CO <sub>2</sub> and O <sub>2</sub> primarily dissolve before diffusing into individual cells?	A. In the cell wall material <b>B. In the water film lining the intercellular spaces</b> C. Directly into the cytoplasm D. In the chloroplast stroma
3	The normal breathing rate in human being is:	A. 10-40 times per minute <b>B. 16-20 times per minute</b> C. 30-40 times per minute D. None of these
4	The primary chemical stimulus for breathing is the concentration of.	<b>A. Carbon dioxide in blood.</b> B. Oxygen in blood C. Carbon oxide in muscles D. Oxygen in muscles.
5	Which gas is released by plants during cellular respiration, both day and night?	A. Oxygen <b>B. Carbon dioxide</b> C. Methane D. Hydrogen
6	During inhalation, what happens to the intercostal muscles and the diaphragm?	A. Intercostal muscles relax, diaphragm contracts B. Intercostal muscles contract, diaphragm relaxes <b>C. Both intercostal muscles and diaphragm contract</b> D. Both intercostal muscles and diaphragm relax
7	Within the internal structure of a plant leaf, what is the main function of the numerous interconnected intercellular air spaces surrounding the mesophyll cells?	A. To store excess water for drought conditions B. To facilitate the transport of sugars to other parts of the plant <b>C. To allow for efficient diffusion of gases like CO<sub>2</sub> and O<sub>2</sub> throughout the leaf</b> D. To provide structural support and rigidity to the leaf tissue
8	How do submerged aquatic plants primarily exchange gases with their environment?	A. Through specialized stomata on their leaves. B. Via lenticels present on their stems. <b>C. Across their entire general body surface.</b> D. Only through their root hairs.
9	No. of bronchi in the air passage way are:	A. 1 <b>B. 2</b> C. 3 D. 4
10	Which gas is absorbed through stomata of plant during night?	A. Carbon dioxide <b>B. Oxygen</b> C. Nitrogen D. Hydrogen
11	The opening and closing of stomata are regulated by the turgidity of which specialized cells?	A. Epidermal cells B. Mesophyll cells <b>C. Guard cells</b> D. Companion cells
12	Lungs are enclosed in a membrane called;	A. peritonium <b>B. pleural membrane</b> C. epidermis pericardium

13	What percentage of oxygen inhaled from air during breathing?	B. 22% C. 23% D. 24%
14	Which respiratory disorder is most strongly associated with uncontrolled cell growth in the lung tissues, often linked to smoking?	A. Asthma B. Emphysema C. Lung Cancer D. Tuberculosis
15	In old woody stems and roots, gaseous exchange occurs through specialized pores called:	A. Stomata B. Lenticels C. Root hairs D. Epidermis
16	Which part of the human respiratory system is responsible for the actual exchange of gases (oxygen and carbon dioxide)?	A. Trachea B. Bronchi C. Alveoli D. Larynx
17	What type of blood vessels surrounds the alveoli?	A. Artery B. Arteriole C. Capillary D. Vein
18	How many carcinogens are present in cigarette smoke?	A. 40 B. 50 C. 60 D. 70
19	Which structure actively helps in taking the air out of lungs?	A. Nasal cavity B. Bronchus C. Bronchiole D. Diaphragm
20	What are the tiny air sacs in the lungs where the actual exchange of gases (oxygen and carbon dioxide) occurs?	A. Bronchi B. Trachea C. Bronchioles D. Alveoli