

RESPIRATION AND SOME BASIC CONCEPTS

1. Exchange of air occurs in _____ which are also known as 'air sacs'.

A. alveoli Gaseous exchange occurs in alveoli. Due to the presence of alveoli, surface area of the lungs for exchange of gases increases to a great extent.

2. Identify bronchus in this diagram. **B**

3. Identify the correct sequence of the pathway through which air travels after entering the body.

B. Pharynx, larynx, trachea, bronchioles

4. Which process does not occur in the nasal cavity?

B. Exchange of gases

Gaseous exchange occurs in lungs.

5. Normal rate of respiration in an adult human being is _____ times/ minute.

C. 16-18

6. What does spirometer measure?

A. Capacity of lungs

B. Volume of air inhaled and exhaled

C. Residual air

D. All of these

Spirometer is an instrument used to measure various lung volumes and lung functions.

7. Identify diaphragm in this diagram. **E (A – trachea, B – bronchus, C – bronchiole, D – pleura)**

Diaphragm is a respiratory muscle which lies underneath the lung bases.

8. What is the leaf-like structure which prevents the entry of food into respiratory passages?

A. Epiglottis

9. Which part of the respiratory tract is also known as the voice box?

A. Larynx Voice is produced in the larynx; therefore it is also known as the voice box.

10. Which cells of the blood carry oxygen to different parts of the body?

Red blood cells. Hemoglobin present in the red blood corpuscles (RBCs) carries oxygen to different parts of the body.

11. True or false? Trachea contains 16-20 'C'-shaped cartilaginous rings. (chrupavkovity prsteneč)

O True Cartilaginous rings prevent the trachea from collapsing.

12. True or false? Breathing through the mouth is considered as good as breathing through the nose.

O False Hairs and mucus present in the nasal cavity trap the foreign particles and bacteria and thus prevent them from entering the body. This function cannot be achieved when we breathe through the mouth.

13. True or False? Exhalation and inhalation of air is known as "cellular respiration".

O False Various metabolic activities of the body need oxygen for energy and produce CO₂ as an end product. This exchange of gases at the cellular level is known as cellular respiration.

14. True or false? Two-layered membrane which covers the lungs is known as pericardium.

O False It is 'pleura'. Pericardium covers the heart.

15. What is a specialist of the respiratory system called?

pulmonologist, ENT doctor (ORL doctor)

16. Which respiratory disease do dyspnoea, wheezing and difficulty exhaling most commonly characterize?

Asthma. The majority of children with asthma experience its onset within the first two years of life, but it can occur in those as young as a few weeks. Attacks can vary greatly from occasional periods of wheezing and slight dyspnoea to severe attacks that almost cause suffocation. (dyspnoea = difficulty breathing)

17. What difference is there between pulmonary arteries and other arteries in the body?

They carry deoxygenated blood. Every artery in the human body except pulmonary arteries carries oxygenated blood. For this reason, the definition of an artery is a vessel which carries blood AWAY from the heart. Every vein in the human body carries deoxygenated blood, except for pulmonary veins. As above, for this reason, the definition of a vein is a vessel which carries blood TOWARDS the heart. Pulmonary arteries divide, following branching patterns of bronchi, i.e. to the lungs, to the lobes, to the segments. This means each lung segment is an independent unit with its own air and blood supply.

18. What is the test called in which a camera is introduced into the lungs via the trachea?

Bronchoscopy.

19. What are the two medical terms for Adam's apple?

Thyroid cartilage, laryngeal prominence

20. A surgical operation to make a hole through the throat into the windpipe, so as to allow air to get to the lungs in cases where the trachea is blocked. After the operation, a tube is inserted into the hole to keep it open. The tube may be permanent if it is to bypass an obstruction, but can be removed if the condition improves. What are the names of the two procedures (cutting and making an opening) involved in the operation?

Tracheostomy (-stomy {from stoma mouth} – a surgical operation performed to make an artificial opening into a specific part) following tracheotomy (-tomy – incision)