

3. Name the gas which is expelled out during ~~exhale~~ expiration. Where is it originally produced in our body?

The gas which is expelled out during expiration is carbon dioxide.

It is produced as a result of oxidation of glucose in the tissues. [Cellular Respiration]

4. Name the following

- i) Anaerobic (Cellular respiration)
- ii) Aerobic (Gaseous transport)
- iii) Alveoli
- iv) Outer pleura, inner pleura

### Long Answer Questions

Q1) Why is respiratory system necessary?

Respiration is very important for body. Respiration in human beings is divided into two parts; the first involves taking in oxygen from the air or breathing. The respiratory system is responsible for breathing in and out of air, and exchange of gas. The main parts of respiratory system are nostrils, trachea or wind pipe and lungs.

2. What factors are most likely to affect the breathing rate?

Smoking, exercises increases the rate of breathing, allergies affects a person breathing rate and the rate of breathing fluctuates while sleeping.

3. What happens to the energy liberated during respiration?

The energy liberated during respiration is utilised for carrying out various life process. Some of the energy liberated during the breakdown of the glucose, is in the form of heat.

4. What do you understand by inhalation and exhalation? How are they different from each other?

~~Inhalation~~ A physical process, by which the air containing oxygen is drawn into the lungs and air containing carbon dioxide is forced out from lungs is breathing. Breathing involves two steps: Inhalation, Exhalation.

Inhalation: Ribs move upwards and outwards.  
Diaphragm is pushed downwards and flattens.  
Volume of chest cavity increases.  
Lungs expands air pressure becomes low.

→ atmospheric air at higher pressure rushes to the lungs.

Exhalation: Ribs move downwards and inwards.

Diaphragm moves upward and becomes dome shaped.

Volume of chest cavity decreases.

Lungs size reduces, air pressure becomes high.

Air rushes out of lungs as atmospheric air pressure is lower.

5) What do you understand by the respiratory disease? Name any three common respiratory disease.

Any of the diseases that affects human's respiration is called respiratory <sup>disease which</sup> system may affect any of the organs that have to do with breathing.

→ Bronchitis, Asthma and Pneumonia.

6) State the cause and treatment for the following diseases:

a) TUBERCULOSIS:

Cause: Caused by bacteria that can spread by air, dust or sputum.

Treatment: BCG Vaccine, Antibiotics streptomycin.

b) Pneumonia:

Cause: Caused by bacteria inhaled through air or by contact.

Treatment : Antibiotic - Penicillin.

c) Bronchitis :

Cause : Caused by virus, air pollution or smoking

Treatment : Drinking plenty of fluids, following a well balanced diet, frequent hand washing and rest.