Ch. 9 : GAS exchange

1. The skin is the major site of gas exchange in _____

- flatworms
- jellies
- sponges

1. The gills are the major site of gas exchange in _____

- fish

1. The tracheal systems are the major site of gas exchange in _____

- arthropods

1. The lungs are the major site of gas exchange in _____

- tetrapods that live on land
- mammals
- reptiles
- birds

2. The major site of gas exchange in _____is skin

- flatworms
- jellies
- sponges

2.The major site of gas exchange in _____ are gills

- fish

2. the major site of gas exchange in _____ are tracheal systems

- arthropods

2. the major site of gas exchange in _____are lungs

- tetrapods that live on land
- mammals
- reptiles
- birds

3. Gills _____

- absorb oxygen
- release carbon dioxide
- increase the surface to volume ratio
- increase the surface area for gas exchange
- are extensions of the body

4. Nonbird reptiles use _____ as the respiratory surface

- [simple] lungs

4. Amphibians use _____ as the respiratory surface

- small lungs
- their body surfaces

4. Birds and mammals use _____ as the respiratory surface

- more complex lungs

5. In the human respiratory system, air passes from nasal cavity to the _____

- pharynx

5. In the human respiratory system, air passes from pharynx to the _____

- larynx

5. In the human respiratory system, air passes from larynx to the _____

- trachea

5. In the human respiratory system, air passes from trachea to the _____

- bronchi

5. In the human respiratory system, air passes from bronchi to the _____

- bronchioles

5. In the human respiratory system, air passes from bronchioles to the _____

- alveoli

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nasal cavity > pharynx > larynx > trachea > bronchi > bronchioles > alveoli

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6. The actual site of gas exchange in human is _____

- alveolai = ***alveoli*** *نفس الشيء خطأ مطبعي بالموقع التفاعلي بس.*

7. Alveoli are _____

- the actual sites of gas exchange
- surrounded by capillaries
- having huge surface area (100m2 in humans)
- the site where O2 diffuses [into] the blood
- the site where CO2 diffuses [out] of the blood

8. Inhalation occurs when _____

- the rib cage expands
- the diaphragm moves downward
- the volume of the chest cavity increases, lowering the air pressure around lungs
- air rushes into lungs to equalize the pressure difference

8. Exhalation occurs when _____

- the rib cage contracts
- the diaphragm moves upward
- the pressure around the lungs increases
- air is forced out of the respiratory tract

9. Smoking _____

- can cause heart disease
- raises blood pressure
- can cause emphysema
- can cause lung cancer
- can damage mucus and cilia in the respiratory passages
- increases the harmful types of cholesterol
- increases the risk of heart attacks and strokes

10. In the lungs, blood _____

- picks up O2
- drops off CO2

10. In the body tissues, blood _____

- drops off O2
- picks up CO2

11. During the transport of gases between alveoli and blood _____

- gases in the alveoli have more O2 and less CO2 than gases the blood
- O2 moves from the alveoli of the lungs into the blood
- CO2 moves from the blood into the alveoli of the lungs

11. During the transport of gases between blood and tissues _____

- the tissues have more CO2 and less O2 than in the blood
- O2 moves from the blood into the tissues
- CO2 moves from the tissues into the blood

12. Iron- containing pigment (hemoglobin) _____

- is found in many invertebrates
- is found in almost all vertebrates
- buffers blood
- transports oxygen

12. Copper- containing pigment (hemocyanin) _____

- is found in Mollusca
- is found in Arthropods

13. Blood vessels _____

- transport blood throughout the entire body
- are networks of hollow tubes

13. Heart _____

- pumps blood through body

14. In the four-chambered hearts _____

- there are [two] atria and [two] ventricles
- the left side of the heart pumps blood from lungs to body
- the right side of the heart pumps blood from body to lungs
- oxygen rich blood is completely separated from oxygen poor blood

15. Capillaries _____

- composed of a single layer of epithelial cells
- are narrow, blood cells flows in a single file
- increases surface area for gas and fluid exchange
- exchange gas and other transfers in the capillary beds

15. Arteries _____

- have thicker walls
- are under more pressure

15. Veins _____

- force blood back to right heart atrium
- have one-way valves that restrict backward flow

16. The cardiac output _____

- is the amount of blood/minute pumped into systemic circuit

16. The heart rate _____

- defined as the number of beats/minute

16. The heart valves _____

- prevent the backflow of blood

16. The heart murmur _____

- is a defect in one or more heart valves

17. The pacemaker (SA node) _____

- sets the rate of heart contractions
- generates electrical signals in atria

17. The AV node _____

- relays electrical signals to the ventricles

18. A heart attack is defined as _____

- the damage to cardiac muscle typically from a blocked coronary artery

18. The stroke _____

- is the death of brain tissue from blocked arteries in the head

18. Atherosclerosis _____

- is the development of plaques inside walls of blood vessels
- narrow the blood vessels
- reduced the blood flow

18. The blood pressure _____

- is defined as the force blood exerts on vessel walls
- Depends on cardiac output and resistance of vessels
- Highest in arteries and lowest in veins
- is measured as systolic and diastolic pressure

19. Plasma contains fibrinogen, which convert into fibrin that help _____

- in blood clotting

20. The platelets _____

- are small fragments of cells

- promote clotting

20. The white blood cells (leukocytes) _____

- function inside and outside the circulatory system

- fight cancer

- fight infections

20. The red blood cells (erythrocytes) _____

- transport O2 bound to hemoglobin

21. Some athletes artificially increase their red blood cell production by injecting _____

- erythropoietin