



BIOLOGY

BOOKS - BETOPPERS

RESPIRATION AND EXCRETION

Formative Worksheet

1. Cellular respiration is a process in which food is broken down in a cell and is converted into energy. Respiration is an example of

- A. a catabolic process
- B. transportation of ions
- C. anabolic process
- D. excretion of ions

Answer:



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2. Which of the following statements about cellular respiration is correct?

A. Oxygen is released during cellular respiration.

B. Cellular respiration leads to the formation of starch.

C. Cellular respiration leads to the formation of glucose.

D. Carbon dioxide is released during cellular respiration

Answer:



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3. The given equation represents respiration.



In the given equation, X represents

A. water

B. lipids

C. proteins

D. vitamins

Answer:



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4. During respiration, i and ii are utilized to produce energy, CO_2 , and H_2O .

Which alternative completes the given statement?

A. i- glucose ii- oxygen

B. i- oxygen ii- carbon monoxide

C. i-carbon monoxide ii- sulfur dioxide

D. i- sulfur dioxide ii-glucose

Answer:



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5. Aerobic respiration is a type of cellular respiration which takes place in the presence of oxygen. Which of the following substances is not produced during aerobic respiration?

A. Water

B. Energy

C. Carbon dioxide

D. Lactic acid

Answer:



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6. Which of the following statements regarding the process of anaerobic respiration is correct?

- A. It involves breakdown of alcohol,
- B. It occurs in presence of oxygen,

C. It involves production of water.

D. It releases carbon dioxide.

Answer:



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7. Yeast is commercially used for the preparation of alcohol and __i__ by the process of ____ii____. The information in which alternative completes the given statement?

A. i-wine ii- fermentation

B. i-antibiotics ii-fermentation

C. i-wine ii-aerobic respiration

D. i-antibiotics ii-aerobic respiration

Answer:



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8. The given equation illustrates the breakdown of glucose in a yeast cell. Glucose

\xrightarrow{i} \xrightarrow{ii} + Carbon dioxide + Energy The

information in which alternative completes the given equation?

A. i- Absence of oxygen ii- Alcohol

B. i- Absence of oxygen ii-Water

C. i- Presence of oxygen ii-Alcohol

D. i- Presence of oxygen ii-Water

Answer:



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9. The alternatives in the given table can be correctly matched as

Column A		Column B	
i	Normal respiration in humans	a	$\text{CO}_2 + \text{Ethanol}$
ii	Muscle cramps	b	$\text{CO}_2 + \text{H}_2\text{O}$
iii	Fermentation	c	Lactic acid

A. i-b,ii-c,iii-a

B. i-c,ii-b,iii-a

C. i-a,ii-b,iii-c

D. i-a,ii-c,iii-b

Answer:



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10. Which of the following statements is correct regarding respiration in plants?

A. Respiration stops when photosynthesis occurs.

B. Roots are underground, hence do not respire.

C. Respiration in plants occurs by diffusion.

D. Germinating seeds do not respire.

Answer:



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11. The i present on the ii of plants help in the exchange of gases. The information in which alternative completes the given statement?

A. i-stomata ii-leaves

B. i-stomata ii-roots

C. i-xylem ii-leaves

D. i-xylem ii-roots

Answer:



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12. Breathing is the process of intake of oxygen-rich air and giving out carbon dioxide-rich air. The process of taking-in oxygen-rich air is known as

A. 'exhalation

B. inhalation

C. ingestion

D. egestion

Answer:



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13. The process of releasing carbon dioxide-rich air from the body is known as

A. exhalation

B. inhalation

C. ingestion

D. egestion

Answer:



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14. During a process X, the ribs of a person are moving out and its diaphragm is moving down towards the abdomen, According to the given information, process X

A. can only be inhalation

B. can only be exhalation

C. signifies holding of breath

D. signifies breathing on a whole

Answer:



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15. During the process of exhalation, ribs move in ___ i ___ while the diaphragm moves _ ii _ The

information in which alternative completes the given statement?

A. i-outward ii-downward

B. i-downward ii-upward

C. i-upward ii-inward

D. i-inward ii-outward

Answer:



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16. Dialysis is the artificial process of regulation of fluids and mineral concentration in the human body. Which organ is replaced through dialysis?

A. Lung

B. heart

C. kidney

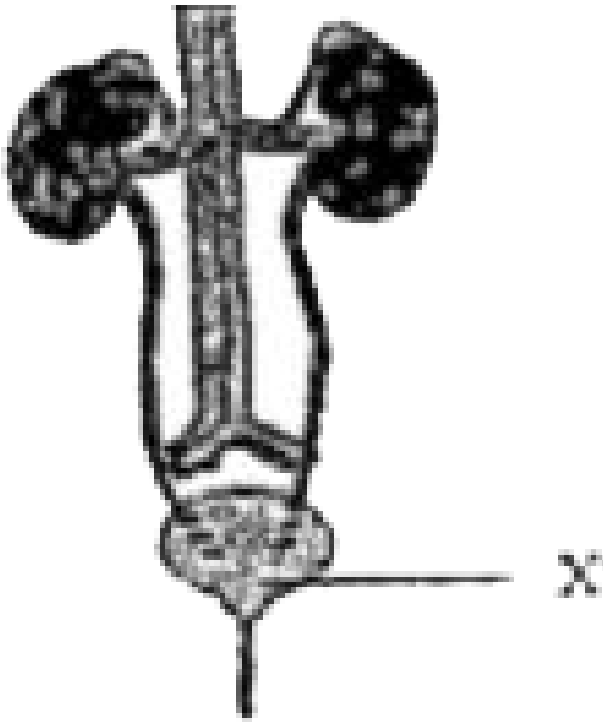
D. liver

Answer:



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17. The given illustration represents the human excretory system.



In the given illustration, the structure labelled X represents

A. kidney

B. ureter

C. urinary bladder

D. urethra

Answer:



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18. Fill in the following blanks with suitable words :

The main excretory product in human beings is

A. Ammonia

B. Urea

C. Glucose

D. Starch

Answer:



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19. What is the primary function of ureter?

A. Storing urine

B. Producing urine

C. Passing urine out of the body

D. Transporting urine from kidneys to
urinary bladder

Answer:



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20. Kidneys filter waste material from blood and remove them from the body. Blood is supplied to the kidneys by the circulatory system. Blood is supplied to the kidneys by the

A. renal vein

B. renal artery

C. pulmonary vein

D. pulmonary artery

Answer:



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21. Urea, uric acid, and ammonia are the chief excretory products of a large number of animals. Which of following animals excretes wastes in the form of urea?

A. Sparrow

B. Humans

C. Lizard

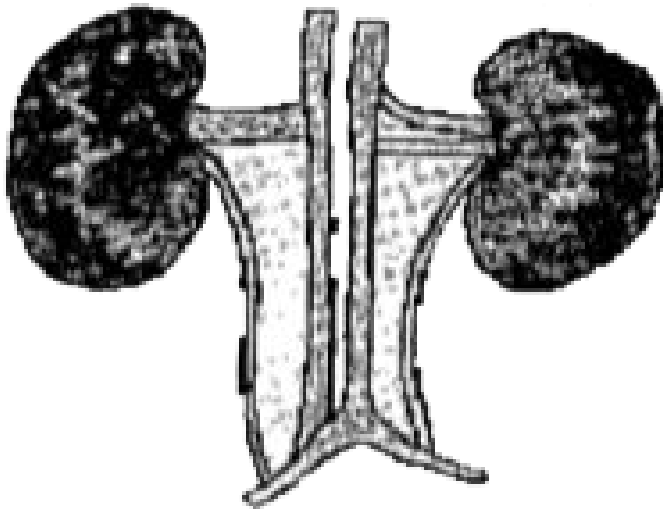
D. Snake

Answer:



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22. The given diagram represents the structure of the human excretory system



Which of following functions is not performed by the kidneys?

A. Formation of urine

B. Oxygenation of blood

C. Reabsorption of water

D. Maintenance of salt balance

Answer:



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23. On an average, a person excretes about 1.2 L of urine in 24 hours. What would be the

approximate amount of urea excreted by the person in same time?

A. 10 gm

B. 30 gm

C. 60 gm

D. 80 gm

Answer:



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24. Dialysis is the artificial process of regulation of fluids and mineral concentration in the human body. Which organ is replaced through dialysis?

- A. lung
- B. heart
- C. kidney
- D. liver

Answer:



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25. The alternatives in the given table can be correctly matched as

	Column A		Column B
i	Kidney	a	Stores urine
ii	Ureter	b	Urinary opening
iii	Urinary bladder	c	Filters blood
iv	Urethra	d	Carries urine for storage

A. i-a ,ii-b,iii-c,iv-d

B. i-a ,ii-b,iii-d,iv-c

C. i-c ,ii-d,iii-a,iv-b

D. i-c ,ii-b,iii-d,iv-a

Answer:



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26. Excretory system performs the functions of formation, storage, and removal of urine.

What is the primary function of urethra?

- A. Storing urine
- B. Producing urine
- C. Passing urine out of the body

D. Transporting urine from kidneys to urinary bladder

Answer:



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27. The basic functional unit of kidney regulates the concentration of water and soluble substances in the body. It functions by filtering blood under pressure. It then reabsorbs the necessary fluids and excretes

the waste products. The above function is performed by

A. renal artery

B. nephron

C. aorta

D. renal vein

Answer:



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28. Which of the following functions is not performed by kidneys?

- A. Removal of body toxins
- B. Supplying oxygen to body
- C. Maintaining body salt balance
- D. Filtering of wastes from the blood

Answer:



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29. Which of the following functions is not performed by kidneys?

- A. Removal of body toxins
- B. Supplying oxygen to body
- C. Maintaining body salt balance
- D. Filtering of wastes from the blood

Answer:



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30. Urine is stored in the urinary bladder before it is excreted. The urinary bladder can, expand and contract depending upon the amount of urine present it. Which system allows the expansion and contraction of the urinary bladder?

- A. Vascular system
- B. Excretory system
- C. Nervous system
- D. Muscular system

Answer:



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31. Urine is a waste product formed inside the kidneys after the filtration of blood. Which of the following substances is not reabsorbed in the nephron from the urine formed inside it?

A. Salts

B. Glucose

C. Uric acid

D. Amino acids

Answer:



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32. ___ i ___ and ___ ii ___ are examples of animals that excrete nitrogenous wastes in the form of uric acid. The information in which alternative completes the given statement?

A. i- Birds ii- lizards

B. i- Lizards ii-fishes

C. i-fishes. ii-humans,

D. i-humans ii-birds

Answer:



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33. The alternatives in the given table can be correctly matched as

	Column A		Column B
i	Sparrow	a	Uricotelic
ii	Prawn	b	Ureotelic
iii	Dog	c	Ammonotelic

A. i-a,ii-b ,iii-c

B. i-a,ii-c ,iii-b

C. i-b,ii-a ,iii-c

D. i-b,ii-c ,iii-a

Answer:



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34. Animals inhabit many environments.

Aquatic animals have specialized excretory organs well adapted to help them survive in

water. Which of the following characteristics is true for fish?

- A. Excretion of concentrated urine
- B. Excretion of dilute urine
- C. Absence of excretory organs
- D. Absence of respiratory organs

Answer:



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1. Cellular respiration is the process wherein

A. food is synthesized in the cell to provide energy

B. food is broken down in the cell to release energy

C. carbon dioxide is exhaled

D. oxygen is inhaled

Answer:



2. Cellular respiration is the process by which cells generate energy molecules. What is not produced during cellular respiration?

- A. Carbon dioxide
- B. Water molecules
- C. Glucose molecules
- D. ATP molecules

Answer:





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3. The given equation represents cellular respiration. Sugar + $X \rightarrow CO_2 +$ water + Energy

in the given during cellular respiration

A. oxygen

B. sunlight

C. nitrous oxide

D. sulfur dioxide

Answer:



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4. Cellular respiration takes place inside the cells of all living organisms. Which of the following events does not occur during cellular respiration?

- A. Formation of carbon dioxide
- B. Breakdown of glucose
- C. Release of energy

D. Release of oxygen

Answer:



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5. Cellular respiration is of two types- aerobic and anaerobic. Which of the following statements regarding aerobic respiration is incorrect?

A. It involves the breakdown of glucose.

B. It does not involve the production of alcohol.

C. It does not require oxygen to carry out the reaction.

D. It releases carbon dioxide as a by-product of the reaction.

Answer:



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6. Anaerobes are organisms which respire through anaerobic respiration. Which of the following organisms is an anaerobe?

A. Fish

B. Yeast

C. Cockroach

D. Earthworm

Answer:



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7. Yeast is used in the commercial production of ___i__ and_ ii_ The information in which alternative completes the given statement?

A. i- vinegar ii-alcohol

B. i-alcohol ii-oil

C. i-oil ii-glucose

D. i-glucose ii-vinegar

Answer:



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8. During strenuous exercises, lactic acid is produced in our muscles because

A. O_2 supply $<$ O_2 demand

B. O_2 supply $>$ O_2 demand

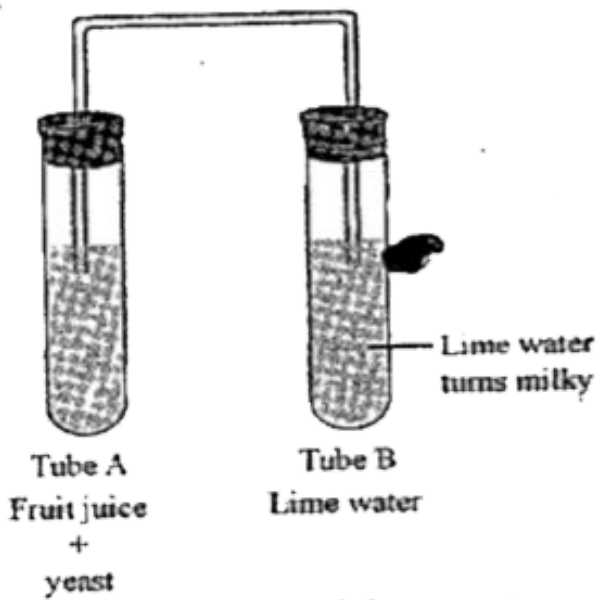
C. O_2 supply is in accordance with O_2 demand

D. O_2 supply is completely restricted in muscles

Answer:



9. Ayush set up the given experiment to study production of alcohol by yeast. He added some yeast to a test tube (tube A) containing fruit juice. He covered the tube with a piece of cork and connected the test tube to another test tube (tube B) containing some lime water with a delivery tube. The whole set up was maintained air tight. After some time, he noticed that the lime water in tube B had turned milky.



Which of the following gases was produced by yeast which is responsible for the given observation?

- A. Oxygen
- B. Nitrogen
- C. Carbon dioxide

D. Carbon monoxide

Answer:



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10. Which process uses carbon dioxide and produces oxygen as a waste product?

A. Transpiration

B. Respiration

C. Photosynthesis

D. Osmosis

Answer:



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11. In plants, gaseous exchange occurs through

A. xylem

B. phloem

C. stomata

D. chloroplast

Answer:



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12. Which of the following activities is a significant function of the nasal cavity?

- A. Cleaning the inhaled air
- B. Cleaning the exhaled air
- C. Initiating the process of inhalation
- D. Initiating the process of exhalation

Answer:



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13. Which of the following events does not take place during inhalation?

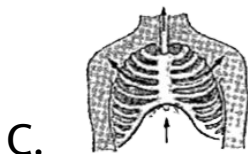
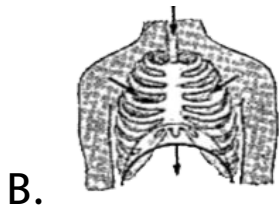
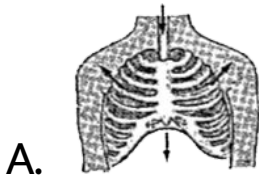
- A. Upward and outward movement of ribs
- B. Downward movement of diaphragm
- C. Decrease in the size of chest cavity
- D. Movement of air into the lungs

Answer:

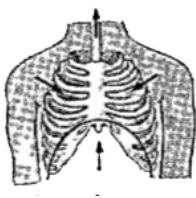


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14. Which illustration represents the process of inhalation?



D.



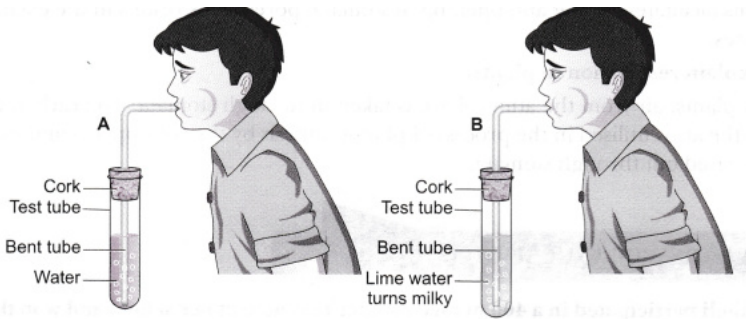
Answer:



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15. In the given picture there is a lime water in A and B test tubes. A boy is breathing out the air into the test tubes. Predict your answers for the following : What was the colour of lime water in test tubes 'A' and 'B' before you began

the experiment ?



A. The lime water will turn milky indicating the presence of carbon dioxide in exhaled air.

B. The lime water will turn milky indicating the presence of oxygen in exhaled air.

C. The lime water will remain unchanged indicating the presence of carbon

dioxide in exhaled air.

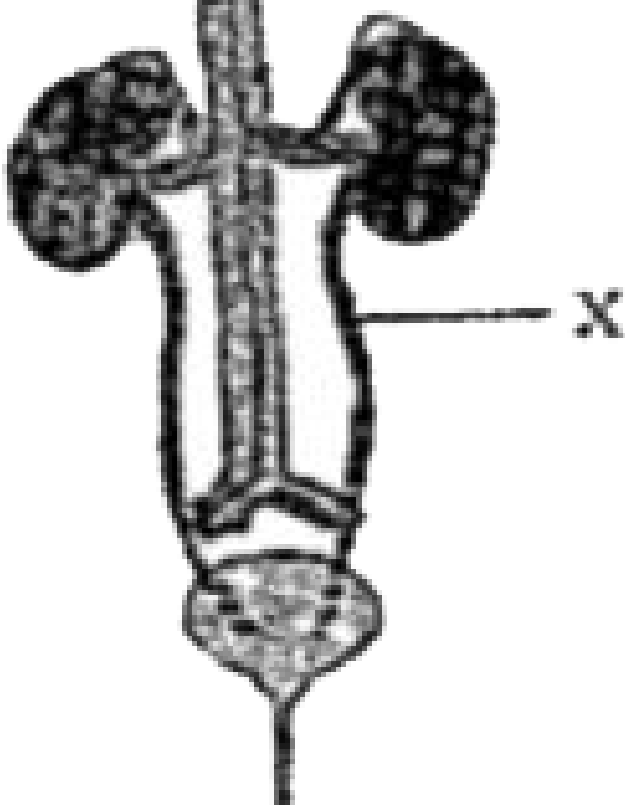
D. The lime water will remain unchanged indicating the presence of oxygen in exhaled air.

Answer:



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16. The given illustration represents the human excretory system.



In the given illustration, the structure labelled X represents

A. kidney

B. ureter

C. bladder

D. urethra

Answer:



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17. Body cells produce a large number of waste products that enter the blood. These waste products need to be removed from the body for the proper functioning of cells. The organ that filters waste from blood is the

A. brain

B. heart

C. kidney

D. stomach

Answer:



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18. Which of the following functions is not performed by kidneys?

- A. Removal of body toxins
- B. Supplying oxygen to body
- C. Maintaining body salt balance
- D. Filtering of wastes from the blood

Answer:



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19. Human excretory system is made up of kidneys, ureters, urinary bladder, and urethra.

The structure that helps in the storage of urine is

- A. kidney
- B. ureter
- C. bladder
- D. urethra

Answer:



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20. The kidneys are present in most vertebrate animals. The kidneys are important because they

- A. remove body waste
- B. digest food material
- C. pump blood to all body parts
- D. control different body movements

Answer:



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21. Dialysis is the artificial process of regulation of fluids and mineral concentration in the human body. Which organ is replaced through dialysis?

A. lung

B. heart

C. kidney

D. liver

Answer:



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22. The lungs end in alveoli, which are sac-like structures. The alveoli surface allows the exchange of respiratory gases between the blood cells and air. This helps in the purification of blood." Kidneys also play a role in this process. The basic unit of kidney, where blood gets filtered, is called

A. ureter

B. neuron

C. urethra

D. nephron

Answer:



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23. Excretory organs help the body in getting rid of waste products: Which of the following organs is not an excretory organ?

A. urethra

B. kidneys

C. lungs

D. heart

Answer:



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24. Human excretory system is made up of

kidneys, ureters, urinary bladder, and urethra.

The structure that helps in the formation of

urine is

A. urinary bladder

B. urethra

C. ureter

D. kidney

Answer:



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25. The kidneys filter waste products present in the blood and excrete them. This waste is produced due to the chemical reactions

occurring in body. The basic unit of kidney is known as the

A. ureter

B. urethra

C. neuron

D. nephron

Answer:



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26. Which of the following organs is not part of the excretory system?

A. kidneys

B. ovaries

C. bladder

D. ureter

Answer:



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27. Kidneys produce

A. urea

B. urine

C. carbon dioxide

D. nitrogen dioxide

Answer:



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28. The kidneys are the part of the excretory system. They are present in the abdominal cavity. The kidneys perform the function of

- A. removing metabolic waste from blood
- B. removing carbon dioxide from blood
- C. controlling body movement
- D. aiding body movement

Answer:



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29. Different animals excrete different types of nitrogenous wastes. Which of the following animals excretes ammonia?

A. fish

B. snake

C. lizard

D. cow

Answer:



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1. The process in which food is oxidized and energy is released is called

A. Excretion

B. Respiration

C. Digestion

D. Transpiration

Answer:





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2. The end products of respiration are

- A. Only carbon dioxide
- B. Carbon dioxide and water
- C. Carbon dioxide, water and energy .
- D. Energy and carbon dioxide

Answer:



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3. The process in which only exchanges of gases takes place is called

A. Respiration

B. Breathing

C. Combustion

D. Internal respiration

Answer:



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4. In earthworm, exchange of gases takes place through

A. Water

B. Gills

C. Moist skin

D. Spiracles

Answer:



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5. Alveoli are structures present in

A. Lungs

B. Bronchi

C. Gills

D. All the above

Answer:



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6. The pigment haemoglobin is present in

A. White blood cells

B. Red blood cells

C. Platelets

D. Lymph

Answer:



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7. Transpiration in plants occurs through

A. Stomata

B. Leaf tips

C. Shoot apex

D. Roots

Answer:



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8. The process of removal of waste products from the body is called

A. Transpiration

B. Evaporation

C. Excretion

D. Respiration

Answer:



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9. The structures, present in kidney, which act as filters are

A. Alveoli

B. Nephrons

C. Villi

D. None of the above

Answer:



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10. The urinary bladder opens into

A. Urethra

B. Nephron

C. Ureter

D. Neuron

Answer:



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1. During respiration, when energy is released, ___ and ___ are also produced



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2. The substance in red blood cells that joins with oxygen is called ___



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3. Anaerobic respiration is carried out by ___



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4. Skin helps in the excretion of water and _



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5. Excretion of wastes in unicellular organisms takes place by _____



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6. Getting rid of waste materials in living beings is called ____



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7. In humans, carbon dioxide is excreted through ____



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8. Kidneys are made up of a number of filters called ____



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9. Each kidney is connected to the urinary bladder by a tube called _____.



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10. In insects, breathing occurs through openings called ____



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11. Fish respire through structures called ____



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12. Air sacs present of lungs are called ____



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13. The waste product of respiration is



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14. The process by which energy is produced for use in various functions of the body is called



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Summative Worksheet Define The Following Terms

1. Respiration



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2. Breathing



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3. Internal respiration



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4. Aerobic respiration



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5. Anaerobic respiration



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6. Transpiration



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Summative Worksheet Differentiate Between The Following

1. Breathing and Respiration



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2. Combustion and Respiration



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3. Aerobic respiration and Anaerobic respiration



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4. Transpiration and excretion



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Summative Worksheet Give One Word For The Following

1. The process in which breaking down of food into small molecules occurs.



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2. Coiled tubes acting as filters and present in kidneys,



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3. Large flat muscle found in the chest cavity,



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Summative Worksheet Write True Or False In Front Of The Statements Given Below

1. In respiration, oxygen is required and carbon dioxide is given out.



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2. Diffusion of gases takes place through a small part of root surface.



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3. In anaerobic respiration, complete breakdown of food takes place.



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4. Earthworms absorb oxygen through moist skin,



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Summative Worksheet Give Labelled Diagram Of The Following

1. Respiratory system of humans



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2. Excretory system of humans



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Summative Worksheet Answer The Following Questions

1. Mention the end products of respiration.



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2. Mention the different organs/methods of breathing in animals.



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3. How does respiration occur in plants? Write a note on it.



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4. Write in short about the mechanism of respiration.



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5. What are the main organs of respiratory system in humans?



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6. Define transpiration



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7. Mention the factors affecting the rate of transpiration.



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8. Write a brief note on excretion in flowering plants.



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9. What waste products are removed by the following parts?

Skin



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10. What waste products are removed by the following parts?

Kidneys



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11. What waste products are removed by the following parts?

Lungs



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12. What waste products are removed by the following parts?

Large intestine



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13. Describe the importance of respiration in organisms.



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14. Why do body cells require oxygen?



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15. How does excretion occur in lower plants and animals?



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16. Name the various organs of excretion in humans.



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