Science 8

Life Science Unit Test

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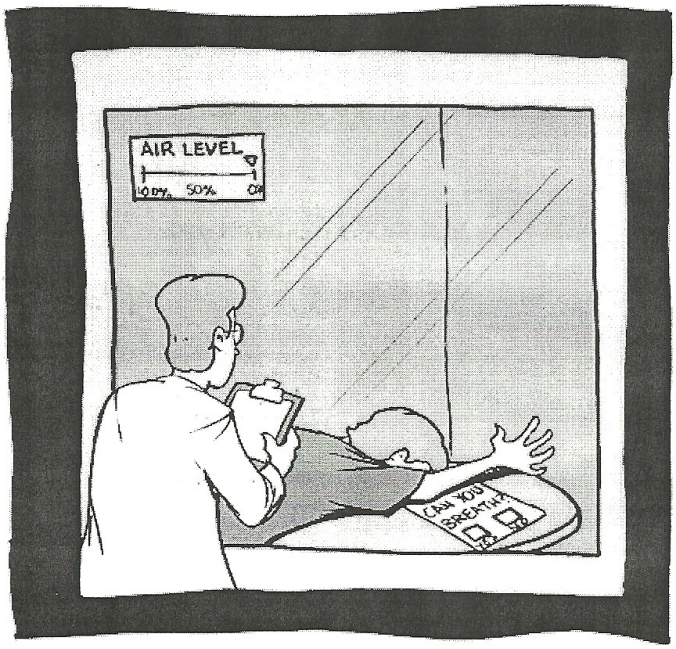
Name: Key

1. **You have the whole block to write the test.**
2. You may use a 1 pg handwritten "cheat sheet" to assist you.
3. You may not use other notes or the textbook during the test.
4. You must write in pen or pencil.
5. Please answer all questions.



Once again, our study proved inconclusive.

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Section 1: Fill in the Blank

Use the following words to fill in the blanks; each word will be used only once, some words will not be used at all:

alveoli	diaphragm	osmosis	stimulus
allergy	duodenum	peristalsis	stomach
antibody	epiglottis	plasma	vaccine
artery	esophagus	platelet	vein
capillary	eukaryotic	prokaryotic	virus
cell membrane	lysosome	protein	white blood cell
cell wall	large intestine	red blood cell	
chloroplast	mitochondria	ribosome	
cytoplasm	nucleus	small intestine	

1. A(n) stimulus is anything which causes a living thing to respond.
2. The cell membrane is the outermost layer of animal cells.
3. The organelle which converts ~~every~~ energy from the sun into glucose is a(n) chloroplast.
4. Plant and animal cells are examples of eukaryotic cells.
5. A non-living thing which tricks the host cell into reproducing it is called a(n) virus.
6. The organelle which cleans up the cell is called a(n) lysosome.
7. The movement of water from an area of high concentration to an area of low concentration is osmosis.
8. The muscle which causes you to breath is called the diaphragm.
9. The flap of skin which prevents food from entering the trachea is called the epiglottis.
10. In the lungs there are tiny air sacs in which gas exchange occurs, they are called alveoli.
11. The component of blood responsible for clotting is a(n) platelet.
12. The first meter of the small intestine is called the duodenum.
13. The large intestine is mainly responsible for re-absorbing water into the body.
14. A way to give the body active immunity without ever having the disease is to get a(n) vaccine.
15. A(n) antibody is produced by B-cells.

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16. Put in the order that blood would flow through them starting with the left atrium:
left ventricle, right ventricle, right atrium, veins, arteries, capillaries, pulmonary vein, pulmonary artery, lungs

left atrium → left ventricle → arteries → capillaries → veins → right atrium → right ventricle → pulmonary artery → lungs → pulmonary vein → left atrium (again)

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Section 2 Matching:

17. Match each step of the scientific method with a description of it (see example)

A:EXAMPLE	Choose a topic, do some research.	B
B: Observation	Think of one specific testable thing which would be true if the hypothesis was correct.	D
C: Hypothesis	Determine if your hypothesis was supported or not.	F
D: Prediction	Test your prediction.	E
E: Experiment	EXAMPLE	A
F: Conclusion	An educated guess.	C

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18. Match each function with the organelle which performs it. There are more organelles than functions.

A: Produce energy	Cell wall	C
B: Move things around cell	Cell Membrane	
C: Rigid structure which surrounds plant cells	Chloroplast	
D: Storage compartment	Nucleus	
E: Clean the cell	Vacuole	D
F: Produce proteins	Ribosome	F
	Vesicle	B
	Golgi body	
	Lysosome	E
	Mitochondrion	A

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19. Match each body system's function with its name, there are more body systems than functions

A: Transports blood	Nervous System	D
B: Produces children	Circulatory System	A
C: Creates a waterproof barrier around the body	Digestive System	
D: Detects changes in the environment and signals these changes to the body which then carries out a response	Respiratory System	F
E: Makes and releases hormones	Muscular System	
F: Major organs are the lungs	Excretory System	G
G: Removes liquid and gas wastes from the body	Immune System	
	Endocrine System	E
	Reproductive System	B
	Integumentary System	C
	Skeletal System	

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Section 3: Short Answer

20. List the 3 characteristics of a system

Made of individual parts that work together
Connected to other systems
If one part is broken, system won't work well

/3

21. List the 4 stages of digestion in the order they occur

Ingesting
Digesting
Absorbing
Eliminating

/4

22. List the 4 ways you can receive an infectious disease

Direct Contact
Indirect Contact
Water and Food
Animal bites

/4

23. List the 5 characteristics of living things and give an example of each.

Characteristic	Example
Respond to environment	Put on coat when cold
Need energy	We need food
Grow	Baby grows into child into adult
Reproduce	Bacteria split into two
Get rid of waste	pee/poop

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24. Give at least two differences between a plant and an animal cell.

Plant cells have cell walls
Plant cells have chloroplast
Plant cells have one large vacuole, animal cells have several

/2

25. A cell, which is composed of 70% water 10% dissolved sugar,15% dissolved salts, is put in a beaker which is 80% water, 5% dissolved sugar 15% dissolved salts. What will happen in terms of osmosis and diffusion if the cell membrane is permeable to water, sugar, and salts.

Water flows into cell, sugar flows out of cell. Salt flows into and out of cell at same rate.

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	C	B
Water	70 ←	80
Sugar	10 →	5
Salt	15 ↔	15

26. Explain the how active immunity is created

After the body has fought off a pathogen some of the B & T cells which can destroy the pathogen remain in the body. If you ever get the same pathogen again those B & T cells multiply and easily destroy the pathogen

1/2

27. Explain why people have allergic reactions.

Immune system ~~attacks~~ over reacts.

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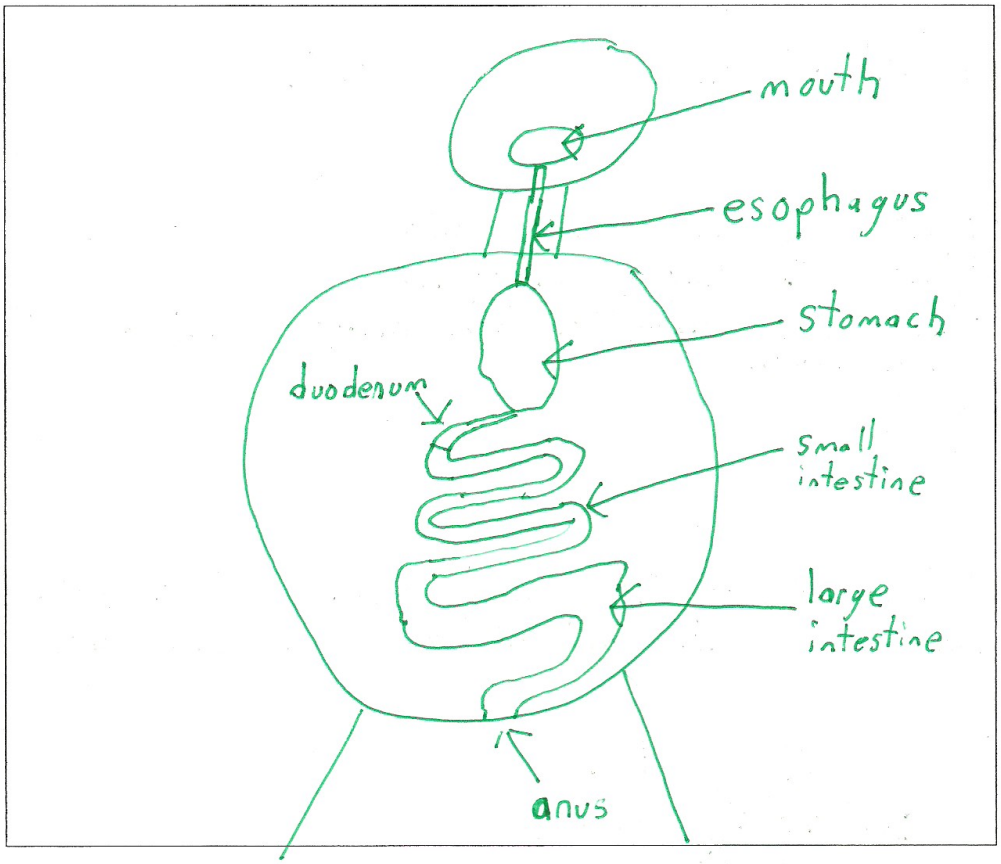
28. Draw and label a diagram of the digestive system which includes: duodenum, esophagus, mouth, stomach, large intestine, small intestine and anus.



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Section 4: Bonus, attempt only after all other questions have been completed.

29. Even though smallpox has been completely eliminated scientists still keeps samples of it in labs. Do you think this is a good policy, or would it be better to just destroy all of it? Explain your reasoning.

/2