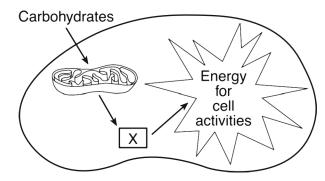
Date: \_\_\_\_\_

1. The diagram below represents a series of events that occur in living cells.



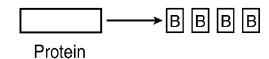
Which molecule is indicated by X?

- A. glucose
- B. ATP

- C. carbon dioxide
- D. protein

2. The diagram represents one metabolic activity of a human.

## Metabolic Activity A



Letters A and B are best represented by which row in the chart?

Row	Metabolic Activity A	В
(1)	respiration	oxygen molecules
(2)	reproduction	hormone molecules
(3)	excretion	simple sugar molecules
(4)	digestion	amino acid molecules

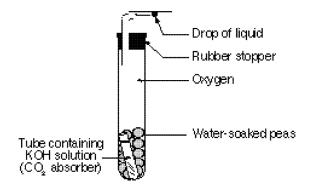
A. (1)

B. (2)

C. (3)

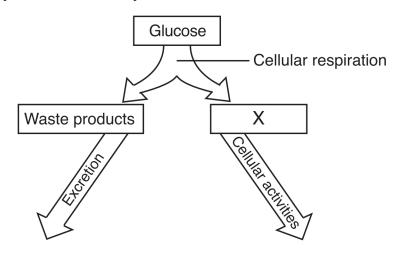
- D. (4)
- 3. The energy found in ATP molecules synthesized in animal cells comes directly from
  - A. sunlight
- B. organic molecules
- C. minerals
- D. inorganic molecules

4. In the accompanying demonstration, which process performed by the peas when they start to grow causes the drop of liquid to move to the left?



- A. protein synthesis
- B. photosynthesis
- C. digestion
- D. cellular respiration

5. The diagram below represents a biochemical process.



Which molecule is represented by X?

A. DNA

- B. starch
- C. protein
- D. ATP
- 6. Base your answer(s) to the following question(s) on the information below and on your knowledge of biology.

A student is opening and closing clothespins as part of a lab activity. The student begins to experience muscle fatigue, and the rate at which the student is opening and closing the clothespins slows.

In order for the muscle fatigue to end, the muscle cells must be provided with

- A. oxygen
- B. nitrogen
- C. carbon dioxide
- D. amino acids

	A.	diffusion	В.	photosynthesis	C.	respiration	D.	active transport
8.	Orga	anisms release stored che assimilation		-		e process of respiration	D.	ingestion
9.		glucose + oxygen enzymenin which organelles are	nes v	water + carbondioxide + 3	6 A7	P		
	A.	ribosomes	В.	endoplasmic reticula	C.	nuclei	D.	mitochondria
10.	This	equation represents a pr	oces	s that occurs in both plan	nts a	nd animals.		
	glucose + oxygen $\xrightarrow{\text{enzymes}}$ water + carbondioxide + 36 ATP  On a sunny day, much of the carbon dioxide produced by a green plant may be							
	A.	used for fermentation			B.	used for photosynthesis		
	C.	stored in vacuoles			D.	converted to oxygen gas		
11.	Whi	ch of the following is br	oken	down in the body to rel	ease	energy?		
	A.	sugar	B.	water	C.	salt	D.	oxygen
12.	Whi	ch of the following is pro	oduc	ed when sugar is digeste	d in	an animal cell?		
	A.	carbon dioxide	В.	chlorophyll	C.	oxygen	D.	sunlight

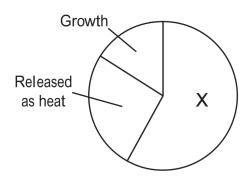
Which process is directly used by autotrophs to store energy in glucose?

7.

- 13. Which molecule in plant cells first captures the radiant energy from sunlight? B. carbon dioxide C. chlorophyll A. glucose D. adenosine triphosphate 14. **Photosynthesis** The following equation represents the process of photosynthesis in green plants.  $6CO_2 + 6H_2O \xrightarrow{\text{Light}} C_6H_{12}O_6 + 6O_2$ Which statement about green plants is true? Most green plants do not need food. Most green plants take in food through their roots. Most green plants take in food through their leaves. Most green plants manufacture their own food. 15. The process of cellular respiration occurs in A. both plant and animal cells. B. plant cells only. C. animal cells only. D. neither plant nor animal cells.
  - 6. Which of the following statements best describes photosynthesis?
    - A. Carbon dioxide and water are turned into sugar and oxygen.
    - B. Sugar and oxygen are turned into water and carbon dioxide.
    - C. Oxygen and carbon dioxide are turned into water and sugar.
    - D. Water and sugar are turned into oxygen and carbon dioxide.

17. Plants absorb solar energy during photosynthesis. The graph below represents how this energy is distributed in some plants.

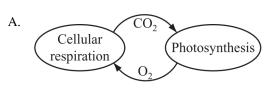
## **Energy Distribution**

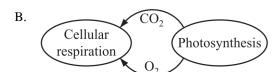


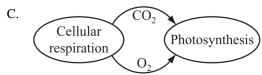
Which of the following statements describes what happens to the energy represented by the section labeled X?

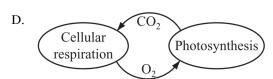
A. It is recycled to the Sun.

- B. It is consumed by decomposers.
- C. It is lost to the soil and the atmosphere.
- D. It is used for cellular respiration and maintenance.
- 18. Which of the following diagrams accurately represents the use of gases in both cellular respiration and photosynthesis?









- 19. In which of the following ways does the respiratory system help to maintain homeostasis during exercise?
  - A. Reserves of oxygen are built up in the alveoli.
  - B. The pharynx supplies glucose so that the muscles can produce ATP.
  - C. Breathing rate is increased to exchange oxygen and carbon dioxide more rapidly.
  - D. The lungs release hemoglobin so that the blood can carry more oxygen to tissues.

	A.	They change chemical energy into kinetic energy.	B.	They change solar energy into chemical energy.		
	C.	They change wind energy into heat energy.	D.	They change mechanical energy into solar energy.		
21.	Whi	ich of the following would most likely result if the am	ount	of oxygen reaching a cell is greatly decreased?		
	A.	Mitosis in the cell would begin.	B.	Osmosis in the cell would stop.		
	C.	The cell would produce less energy.	D.	The cell would produce more carbon dioxide.		
22.	Whi	ich of these would happen to the cell if cellular respira	ation	stopped?		
	A.	It would not have the energy it needs to perform its	funct	ions.		
	B.	It would grow larger because it would not be able to	disp	ose of wastes.		
	C.	. It would have to access backup energy trapped in the chemical bonds of food.				
	D.	It would no longer be able to passively transport mat	erials	s across its cell membrane.		
23.	Dur	ing photosynthesis, energy from the sun is trapped in-	_			
	A.	chemical bonds. B. the nuclei of atoms.	C.	enzymes. D. Golgi bodies.		
24.	Whi	ich statement best compares aerobic and anaerobic resp	oirati	on?		
	A.	Less ATP is generated during anaerobic respiration th	nan d	uring aerobic respiration.		
	B.	More water is generated during anaerobic respiration	than	during aerobic respiration.		
	C.	More oxygen is generated during anaerobic respiration	n tha	n during aerobic respiration.		
	D.	Less lactic acid is generated during anaerobic respirat	tion 1	than during aerobic respiration.		

20. Giant redwood trees change energy from one form to another. How is energy changed by the trees?

25.		chemical reaction such as photosynthesis begins with uld be in the products?	16 a	toms of carbon (C), how many atoms of carbon (C)
	A.	12 atoms of carbon (C)	В.	6 atoms of carbon (C)
	C.	3 atoms of carbon (C)	D.	2 atoms of carbon (C)
26.	In a	a food pyramid, which best explains why the number of	of or	ganisms decreases from one trophic level to the next?
	A.	Consumers at the lower level require more energy th	an tl	ne top-level consumers.
	B.	Consumers at the top level require more energy than	the	lower-level consumers.
	C.	The consumers are feeding on larger organisms that	have	less energy.
	D.	The consumers are feeding on smaller organisms that	t hav	re less energy.
27.	Wh	y is protein an important part of a healthy diet?		
	A.	It is needed to change glucose to energy.	B.	It is needed to store nutrients.
	C.	It is needed to repair tissue.	D.	It is needed to produce water.
28.	Wh	at are vitamins?		
	A.	Substances that break down food		
	B.	Bacteria that people get when they eat some foods		
	C.	Substances that people make from protein		
	D.	Substances that people need in small amounts in ord	er fo	or their bodies to function normally
29.	The	be best reason for including protein in a healthy diet is	beca	use it is the main source of
	A.	energy for the body	B.	fiber for digestion
	C.	raw materials for cell growth and repair	D.	vitamins for fiahtins disease
30.	pho	od and oxygen are produced during photosynthesis in autosynthesis.	_	n plants. Chlorophyll is one thing that is needed for

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## 8.L.5.1 Practice Questions 05/21/2014

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1. Answer:	В		
2. Answer:	D		
3. Answer:	В		
4. Answer:	D		
5. Answer:	D		
6. Answer:	A		
7. Answer:	В		
8. Answer:	C		
9. Answer:	D		
10. Answer:	В		
11. Answer:	A		
12. Answer:	A		
13. Answer:	C		
14. Answer:	D		
15. Answer:	A		
16. Answer:	A		
17. Answer:	D		
18. Answer:	A		
19. Answer:	C		
20.	_		

Answer:

В

21. Answer:	C
22. Answer:	A
23. Answer:	A
24. Answer:	A
25. Answer:	В
26. Answer:	В
27. Answer:	C
28. Answer:	D
29. Answer:	C
30.	

Answer:

Sunlight, carbon dioxide, water, air