

Unit 1 Levels of Organization	Chapter 1.5	Maintenance of Life	_____/56 pts
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SECTION OBJECTIVES

- List and describe the major requirements of organisms
- Define **homeostasis**, and explain its importance to survival
- Describe a homeostatic mechanism

Lecture Notes (10)

Requirements of organisms

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If an organism is to survive, the conditions within its body fluids must remain relatively _____

Maintenance of a stable internal environment is called _____

Homeostatic mechanisms help regulate body _____ and blood _____

Homeostatic mechanisms act through _____ feedback

Section Homework (46)

Match the definition to the correct term. 1pt each

	1. A state of balance in which the body's internal environment remains in the normal range	A. Water
	2. A form of energy that is the product of metabolic reactions	B. Foods
	3. The "normal" a particular value should be	C. Oxygen
	4. Substances that provide the body with necessary chemicals in addition to water.	D. Heat
	5. Self-regulating control systems	E. Pressure
	6. A mechanism activated by an imbalance that corrects the imbalance	F. Internal Environment
	7. The most abundant chemical in the body. Required for many metabolic processes and provides the environment in which most of them take place. Transports substances within the organism and is important in regulating body temperature	G. Homeostasis
	8. A force applied uniformly over a surface	H. Homeostatic Mechanisms
	9. A muscle or gland that effects change in the body	I. Receptors
	10. A gas that makes up about 1/5 of ordinary air. It is used to release energy from food substances, thus driving the metabolic process.	J. Set Point
	11. The fluid surrounding an organisms body cells	K. Effectors
	12. Specialized cells that provide information about the environment.	L. Negative Feedback

13. Life depends on the availability of the five requirements (5 points)

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14. Both the _____ and _____ of these factors are important. (2 points)

15. Maintenance of a stable internal environment is called _____. (1 point)



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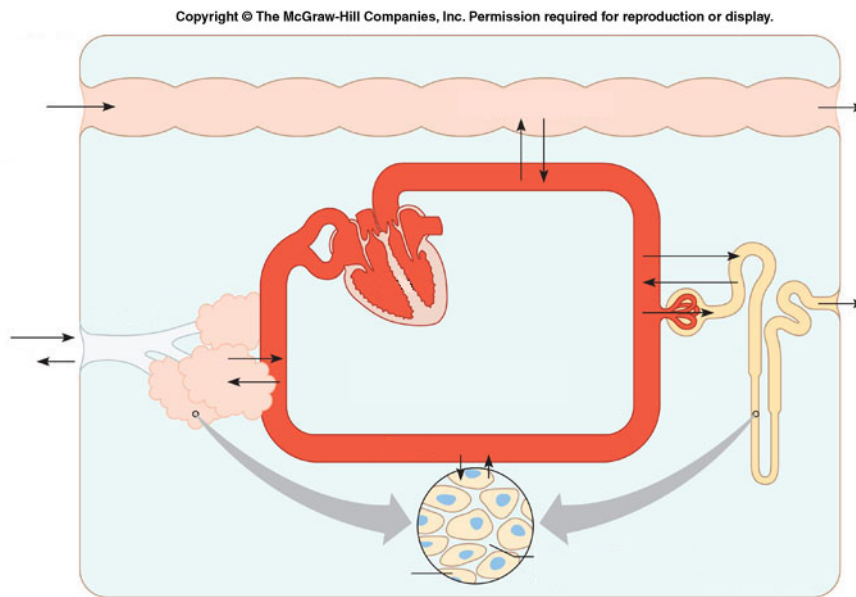
16. Why are observations of the vital signs important to nurses and physicians? (2 points) _____

17. Define *homeostasis*. Include the function of receptors, effectors, and set point. (2 points) _____

18. How is body temperature maintained at 37°C (98.6°F)? (2 points) _____

19. Describe negative and positive feedback mechanisms. Give examples of each. (2 points) _____

20. Label the diagram (14 points)



21. Describe the process of homeostasis by using the diagram on the right. Use body temperature as your example. (4 points)

