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Anatomy & Physiology

Ch. 1 - The Human Body: An Orientation

**Maintaining Life** *(pp. 4-8)*

1. Life Processes of Humans

All living organisms have certain characteristics that set them apart from nonliving things.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* ability to use energy to perform functions (grow, reproduce)
1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* sense stimuli and respond appropriately (both internally & externally)
1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* motion of whole body; of organs; of cells
1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* increase in size of all or part of organism

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* cells become specialized
1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* formation of new cells, or new organisms
1. Survival needs of living things (external factors)

Needed to allow functions/processes to occur

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	* (only one that is NOT an absolute requirement for life)

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Anatomy & Physiology

Ch. 1 - The Human Body: An Orientation

**Homeostasis** (pp. 8-11)

1. Define homeostasis and explain its importance.

1. List examples of variables in the body that may change and lead to a homeostatic adjustment.

2. Explain the body’s “set point” & normal range of values for each of the variables listed above.

1. Maintaining homeostasis is by a FEEDBACK SYSTEM.

1. List and describe the components of a feedback system.

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -

 2. Compare the operation of negative and positive feedback systems and give an example and the steps of the

 operation that would occur.

* 1. Negative Feedback Mechanisms –

Example:

* 1. Positive Feedback Mechanisms –

Example:

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C. Homeostatic imbalance

- When one or more components of the body loses ability to contribute to homeostasis

 the normal balance is disturbed; result in:

1. disorder –
2. disease –

Study Questions:

1. Define homeostasis and explain its importance.

2. Contrast the operations of negative and positive feedback systems.

3. List examples of disturbances can act as stimuli that initiate a feedback system? (List at least two)

4. Contrast between a disease and a disorder.

5. Contrast and give examples of symptoms and signs of a disease or disorder.