

Name \_\_\_\_\_

**AP Biology**  
**TEXT: *Biology*, Campbell and Reece**  
**7<sup>th</sup> Edition**  
**Chapter 44**

**Osmoregulation and Excretion**  
**Thematic Review Guide**

1. Define homeostasis.

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2. How do regulators moderate internal conditions?

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3. How do conformers adapt to changing conditions?

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4. List four processes that account for heat exchange.

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5. How does circulation aid in heat exchange?

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6. How does countercurrent heat exchanger conserve heat?

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7. List some examples of how an ectotherm may maintain higher than expected body temperature. \_\_\_\_\_

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8. Draw a diagram and describe how the feedback mechanism that regulates your body temperature works.

9. How do seagulls deal with the high salt in their diet?

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10. Describe the influence of habitat on the type of nitrogen waste produced by organisms.

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11. Define each of the key functions of the excretory process.

a. Filtration \_\_\_\_\_

b. Reabsorption \_\_\_\_\_

c. Secretion \_\_\_\_\_

d. Excretion \_\_\_\_\_

12. What is the relationship between the kidney and circulatory system?

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13. Describe the three feedback mechanisms that regulate the kidney?

a. ADH \_\_\_\_\_

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b. RAAS \_\_\_\_\_

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c. NAF \_\_\_\_\_

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14. What happens to the filtrate concentration of water as it descends the tubules?

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15. What happens to the filtrate concentration of NaCl as it ascends the tubules?

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