

# STAAR EOC Biology - Study Resources and Practice Questions

## Animal Systems

### TEKS

- B.10.A - Describe the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals.
- B.10.C - Analyze the levels of organization in biological systems and relate the levels to each other and to the whole system.
- B.11.A - Describe the role of internal feedback mechanisms in the maintenance of homeostasis.
- B.9.C - Identify and investigate the role of enzymes.

### Textbook Chapters

- Chapter 28, 2

### Videos

- Watch the 9 videos at the Khan Academy about body systems and 6 about enzymes:
  - <https://www.khanacademy.org/partner-content/crash-course1/partner-topic-crash-course-bio-ecology/crash-course-biology/v/crash-course-biology-125>
  - <https://www.khanacademy.org/test-prep/mcat/chemical-processes/enzymes/v/an-introduction-to-enzymes-and-catalysis>

### Other Resources

- Use the following quizlet to practice with animal systems:
  - <https://quizlet.com/18671255/interactions-in-animal-systems-dpsid-flash-cards/>
- Novozymes article: <http://www.novozymes.com/en/about-us/our-business/what-are-enzymes/pages/default.aspx#tools>
- Chem4Kids website (be sure you hit “next page on biochem”)
  - [http://www.chem4kids.com/files/bio\\_enzymes.html](http://www.chem4kids.com/files/bio_enzymes.html)

**13** What two human systems work together to provide body cells with a constant supply of oxygen while removing carbon dioxide waste products?

- A** Nervous and endocrine
- B** Muscular and skeletal
- C** Respiratory and circulatory
- D** Excretory and integumentary

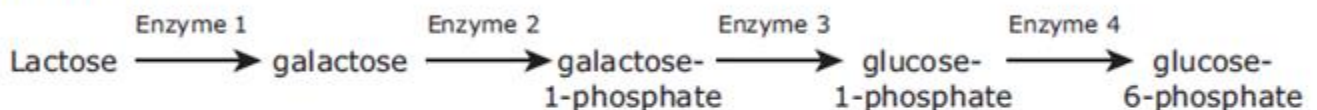
**22** Which of the following correctly describes an interaction that occurs between two body systems of a rabbit that helps the rabbit outrun a pursuing coyote?

- F** The skeletal system releases additional calcium, and the circulatory system retains more sodium in the blood to provide muscles with ions for contraction.
- G** The digestive system increases the rate of digestion, and the excretory system ceases to provide tissues with more nutrients.
- H** The respiratory system increases the breathing rate, and the circulatory system increases blood pressure to provide tissues with more oxygen.
- J** The endocrine system releases hormones that prepare the immune system to deal with possible injuries.

**26** When a person is suddenly cut by a sharp object, a nervous impulse is sent along a sensory neuron to the spinal cord. The impulse is immediately transmitted through motor neurons to produce a response. Which of the following correctly identifies and describes this response?

- F** It is a conditioned response that occurs only to prevent injury.
- G** It is a learned response that does not occur in infants and small children.
- H** It is a reflex response that causes various muscles to contract in order to move away from the object.
- J** It is a voluntary response that is initiated only after the impulse has been carried to the relevant area in the brain.

**30** Lactose is found in milk products. It is converted by the body into a usable form in a series of chemical reactions. The diagram shows the series of reactions that convert lactose into a usable form.



If Enzyme 2 is denatured, the levels of which substance will increase?

- F** Lactose
- G** Galactose
- H** Galactose-1-phosphate
- J** Glucose-6-phosphate