



Practice Worksheet on Crustaceans

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Subject: Biology

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Long Answer Questions

1. Describe the main characteristics of crustaceans, highlighting their place within the broader arthropod group.
2. Discuss the diversity of crustacean habitats and respiratory adaptations.
3. Explain the different feeding strategies observed in crustaceans and their ecological significance.
4. Explain the significance of the exoskeleton in crustaceans and the process of molting.
5. Describe the reproductive strategies of crustaceans, including fertilization methods and variations.
6. Explain the ecological roles of crustaceans within aquatic ecosystems.

7. Discuss the sensory adaptations in crustaceans, explaining their functions in survival and behavior.

8. Explain how the size range of crustaceans reflects their adaptations to different environments and lifestyles.

Multiple Choice Questions

1. Which of the following is a characteristic feature of most crustaceans?

- a) They have two pairs of antennae.
- b) They have a chitinous exoskeleton.
- c) They lack segmentation.
- d) They always have internal fertilization.

2. What best describes the feeding habits of crustaceans?

- a) All crustaceans are parasites.
- b) All crustaceans are herbivores.
- c) Crustaceans show diverse feeding habits.
- d) All crustaceans are carnivores.

3. What type of circulatory system do crustaceans possess?

- a) Open circulatory system
- b) Closed circulatory system
- c) No circulatory system
- d) Incomplete circulatory system

4. Where do crustaceans typically live?

- a) They only live in freshwater.
- b) They always live on land.

- c) They live in diverse aquatic and semi-aquatic habitats.
- d) They only live in marine environments.

5. What is the process by which crustaceans shed their exoskeleton to grow?

- a) Molting
- b) Photosynthesis
- c) Respiration
- d) Excretion

6. How many pairs of antennae do crustaceans typically possess?

- a) Three pairs of antennae
- b) One or two pairs of antennae
- c) No antennae
- d) Four pairs of antennae

7. What types of fertilization are found in crustaceans?

- a) They have only internal fertilization.
- b) They can have both internal and external fertilization.
- c) They lack any form of fertilization.
- d) They only have external fertilization.

8. What best describes the size variation among crustaceans?

- a) They are all microscopic.
- b) They are all the same size.
- c) They vary greatly in size.
- d) They are all macroscopic.

Answer Key

Long Answer Questions - Expected Responses

1. Describe the main characteristics of crustaceans, highlighting their place within the broader arthropod group.

Expected Answer: Crustaceans are a large group within arthropods, characterized by a segmented body, typically with a head, thorax, and abdomen; they possess exoskeletons, and many have specialized appendages.

2. Discuss the diversity of crustacean habitats and respiratory adaptations.

Expected Answer: While many crustaceans are aquatic, using gills for respiration, some have evolved adaptations for terrestrial or semi-aquatic environments, demonstrating evolutionary diversity.

3. Explain the different feeding strategies observed in crustaceans and their ecological significance.

Expected Answer: Crustaceans exhibit diverse feeding strategies, from herbivory and omnivory to carnivory and parasitism, reflecting their ecological roles and evolutionary adaptations.

4. Explain the significance of the exoskeleton in crustaceans and the process of molting.

Expected Answer: The exoskeleton provides structural support and protection, but restricts growth, requiring molting—a process of shedding and replacing the exoskeleton—to facilitate growth.

5. Describe the reproductive strategies of crustaceans, including fertilization methods and variations.

Expected Answer: Most crustaceans have separate sexes and reproduce sexually. Fertilization can be either internal or external, varying among species.

6. Explain the ecological roles of crustaceans within aquatic ecosystems.

Expected Answer: Crustaceans play crucial roles in aquatic food webs, serving as both prey and predators. They are also significant decomposers and contribute to nutrient cycling.

7. Discuss the sensory adaptations in crustaceans, explaining their functions in survival and behavior.

Expected Answer: Many crustaceans have well-developed sensory organs, including antennae for detecting chemicals and currents, and eyes for vision, aiding in finding food and avoiding predators.

8. Explain how the size range of crustaceans reflects their adaptations to different environments and lifestyles.

Expected Answer: The size of crustaceans varies enormously, from microscopic copepods to giant Japanese spider crabs, reflecting evolutionary adaptations to diverse niches.

Multiple Choice Questions – Correct Answers

1. Which of the following is a characteristic feature of most crustaceans?

Correct Answer: They have a chitinous exoskeleton.

2. What best describes the feeding habits of crustaceans?

Correct Answer: Crustaceans show diverse feeding habits.

3. What type of circulatory system do crustaceans possess?

Correct Answer: Closed circulatory system

4. Where do crustaceans typically live?

Correct Answer: They live in diverse aquatic and semi-aquatic habitats.

5. What is the process by which crustaceans shed their exoskeleton to grow?

Correct Answer: Molting

6. How many pairs of antennae do crustaceans typically possess?

Correct Answer: One or two pairs of antennae

7. What types of fertilization are found in crustaceans?

Correct Answer: They can have both internal and external fertilization.

8. What best describes the size variation among crustaceans?

Correct Answer: They vary greatly in size.