

# Phylum Arthropoda: General Characteristics and Insect Anatomy

Biology · Answer Key · 23 Questions

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**1. What is a key characteristic of the body of arthropods regarding symmetry and segmentation?**

- A) Asymmetrical and unsegmented
- B) Radially symmetrical and segmented
- C) Bilaterally symmetrical and metamerically segmented**
- D) Asymmetrical and metamerically segmented

**2. The body segments of arthropods are generally grouped into how many regions?**

- A) One
- B) Two or three**
- C) Four
- D) Five

**3. What forms the head in arthropods due to the specialization of anterior segments?**

- A) The abdomen
- B) The thorax
- C) Cephalization**
- D) The exoskeleton

**4. What covers the external body of arthropods and is periodically shed?**

- A) Endoskeleton
- B) Dermis
- C) Epidermis
- D) Exoskeleton or cuticle**

**5. How is the coelom (body cavity) described in arthropods?**

- A) Well developed
- B) Poorly developed**
- C) Absent
- D) Segmented

**6. What type of appendages do the segments of the body of arthropods possess?**

- A) Unjointed
- B) Fleshy
- C) Jointed and paired**
- D) Spiny

**7. How are the mouth parts of arthropods adapted?**

- A) For a single mode of feeding
- B) For various modes of feeding**
- C) For breathing
- D) For defense

**8. In aquatic arthropods, respiration is mostly carried out by what?**

- A) Tracheae
- B) Book lungs
- C) Gills**
- D) Body surface

**9. Terrestrial arthropods primarily respire through which structures?**

- A) Gills
- B) Tracheae, body surface, and book lungs**
- C) Lungs
- D) Spiracles only

**10. Which excretory organs are found in arachnids?**

- A) Malpighian tubules
- B) Maxillary glands
- C) Antennary glands
- D) Coxal glands**

**11. What type of blood vascular system do arthropods possess?**

- A) Closed type
- B) Open type**
- C) Partially closed
- D) No blood vascular system

**12. The nervous system of arthropods is of what type?**

- A) Mammalian type
- B) Annelidan type**
- C) Molluscan type
- D) Nematode type

**13. What are the components of the arthropod nervous system mentioned?**

- A) Single dorsal nerve cord
- B) Paired anterior dorsal ganglia and midventral nerve cord**
- C) Brain only
- D) No distinct nervous system

**14. How are the sexes described in arthropods?**

A) Hermaphroditic

**B) Separate**

C) Both sexes in one individual

D) Indeterminate

**15. Fertilization in arthropods is normally:**

A) External only

**B) Internal**

C) Absent

D) Parthenogenetic

**16. What is a characteristic of the circulatory system in both annelids and arthropods?**

A) Closed system in both

B) Open system in both

**C) Closed in annelids, open in arthropods**

D) No circulatory system in either

**17. What is a key difference in the body cavity between annelids and arthropods?**

A) Coeliac cavity is large in both

**B) Coeliac cavity is reduced, main cavity is haemocoel in arthropods**

C) Coeliac cavity is absent in both

D) Haemocoel is present in annelids

**18. In insects, the body is typically divided into which three regions?**

**A) Head, thorax, and abdomen**

B) Head, thorax, and tail

C) Head, abdomen, and legs

D) Thorax, abdomen, and wings

**19. How many segments are fused to form the head of an insect?**

A) 3

B) 4

**C) 6**

D) 8

**20. How many segments make up the thorax of an insect?**

A) 2

**B) 3**

C) 4

D) 5

**21. What structures are typically found on the dorsal side of each thoracic segment in insects?**

- A) Walking legs
- B) Antennae
- C) Wings**
- D) Compound eyes

**22. What are the typical excretory organs in insects like the cockroach?**

- A) Gills
- B) Book lungs
- C) Malpighian tubules**
- D) Nephridia

**23. What is the primary function of the exoskeleton in insects, besides protection?**

- A) Respiration
- B) Digestion
- C) Preventing desiccation**
- D) Locomotion