

Multiple Choice

- 1) You are walking in a forest and see a mollusc that does not possess a shell. Which class does this organism belong to?
 - A) polyplacophora
 - B) bivalves
 - C) gastropods
 - D) cephalopods

- 2) Which molluscan class includes marine organisms whose shell consists of eight plates?
 - A) polyplacophora
 - B) bivalves
 - C) gastropods
 - D) cephalopods

- 3) While snorkeling, you observe an active marine animal that moves by jet propulsion and has a series of tentacles and arms bearing suckers. You are observing an animal belonging to which class?
 - A) polyplacophora
 - B) bivalves
 - C) gastropods
 - D) cephalopods

- 4) Which molluscan class includes organisms that are primarily suspension feeders?
 - A) polyplacophora
 - B) bivalves
 - C) gastropods
 - D) cephalopods

- 5) Many of which of the following annelid classes are parasites?
 - A) Oligochaeta
 - B) Polychaeta
 - C) Hirudinea
 - D) all three of these

- 6) Of the annelid classes below, which have segmented bodies?
 - A) Oligochaeta
 - B) Polychaeta
 - C) Hirudinea
 - D) all three of these

- 7) Of the annelid classes below, which ingest soil and produce castings that are agriculturally important?
 - A) Oligochaeta
 - B) Polychaeta
 - C) Hirudinea (leeches)
 - D) all three of these
 - E) two of these

- 8) Which of the following annelid classes has a large number of bristles (chaetae)?
 - A) Oligochaeta
 - B) Polychaeta
 - C) Hirudinea
 - D) all three of these

9) Which of the following traits are not found among the phylum Annelida?

- A) jointed appendages
- B) segmentation
- C) circular and longitudinal muscles
- D) a closed circulatory system
- E) nervous system with anterior ganglia

10) Which of the following can be used to distinguish a nematode worm from an annelid worm?

- 1. type of body cavity (psuedocoelom vs. coelom)
 - 2. presence of segmentation
 - 3. number of embryonic tissue layers (diploblastic vs. triploblastic)
- A) 1 only
 - B) 2 only
 - C) 3 only
 - D) 1 and 2
 - E) 2 and 3
 - F) 1, 2, and 3

11) Which of the following are characteristics of arthropods?

- 1. protostome development
 - 2. bilateral symmetry
 - 3. a pseudocoelom
 - 4. three embryonic germ layers
 - 5. a closed circulatory system
- A) 1 and 2
 - B) 2 and 3
 - C) 1, 2, and 4
 - D) 2, 3, and 5
 - E) 3, 4, and 5

12) Among the invertebrate phyla, phylum Arthropoda is unique in possessing members that have

- A) a cuticle.
- B) a ventral nerve cord.
- C) open circulation.
- D) wings.
- E) segmented bodies.

13) A shared derived characteristic for members of the arthropod sub-phylum that includes spiders would be the presence of

- A) chelicerae.
- B) an open circulatory system.
- C) an exoskeleton.
- D) a cuticle.
- E) a cephalothorax.

14) You find a small animal with eight legs crawling up your bedroom wall. Closer examination will probably reveal that this animal has

- A) antennae.
- B) no antennae.
- C) chelicerae.
- D) A and C
- E) B and C

15) While working in your garden, you discover a segmented animal with two pairs of jointed legs per segment. The animal is probably a

- A) millipede, class Diplopoda.
- B) caterpillar, Class Insecta.
- C) centipede, Class Chilopoda.
- D) polychaete worm, Class Polychaeta.
- E) trilobite, sub-phylum Trilobita.

16) The possession of two pairs of antennae is a characteristic of

- A) spiders.
- B) insects.
- C) centipedes.
- D) millipedes.
- E) crustaceans.

17) Which of the following is a characteristic of adult echinoderms?

- A) secondary radial symmetry
- B) spiral cleavage
- C) gastrovascular cavity
- D) exoskeleton
- E) lophophore

18) Which of the following can extend the stomach through their mouth to feed?

- A) class Crinoidea (sea lilies and feather stars)
- B) class Asteroidea (sea stars)
- C) class Ophiuroidea (brittle stars)
- D) class Echinoidea (sea urchins and sand dollars)
- E) class Holothuroidea (sea cucumbers)

19) Which of the following have distinct central disks and long, flexible, “serpernt-like” arms?

- A) class Crinoidea (sea lilies and feather stars)
- B) class Asteroidea (sea stars)
- C) class Ophiuroidea (brittle stars)
- D) class Echinoidea (sea urchins and sand dollars)
- E) class Holothuroidea (sea cucumbers)

20) Which of the following are elongated in the oral-aboral axis?

- A) class Crinoidea (sea lilies and feather stars)
- B) class Asteroidea (sea stars)
- C) class Ophiuroidea (brittle stars)
- D) class Echinoidea (sea urchins and sand dollars)
- E) class Holothuroidea (sea cucumbers)

21) Which of the following have a mouth that is directed upward?

- A) class Crinoidea (sea lilies and feather stars)
- B) class Asteroidea (sea stars)
- C) class Ophiuroidea (brittle stars)
- D) class Echinoidea (sea urchins and sand dollars)
- E) class Holothuroidea (sea cucumbers)

22) Which of the following can have long, movable spines?

- A) class Crinoidea (sea lilies and feather stars)
- B) class Asteroidea (sea stars)
- C) class Ophiuroidea (brittle stars)
- D) class Echinoidea (sea urchins and sand dollars)
- E) class Holothuroidea (sea cucumbers)

23) Which of the following describe(s) echinoderms?

- A) They have an endoskeleton of hard calcareous plates.
- B) Tube feet provide motility in most species.
- C) They have a pseudocoelom.
- D) Only A and B are true.
- E) A, B, and C are true.

24) Which of the following animal groups is entirely aquatic?

- A) Mollusca
- B) Echinodermata
- C) Arthropoda
- D) Annelida

25) In a tide pool, a student encounters an organism with a hard outer covering that contains much calcium, an open circulatory system, and gills. The organism could potentially be crustacean or a bivalve. Which structure below would allow for the most certain identification?

- A) a mantle
- B) a body cavity
- C) a lophophore
- E) eyes

26) Protostomes that have an open circulatory system and an exoskeleton of chitin are part of which phylum?

- A) Cnidaria
- B) Annelida
- C) Mollusca
- D) Arthropoda
- E) Echinodermata

27) Deuterostomes that have an endoskeleton are part of which phylum?

- A) Cnidaria
- B) Annelida
- C) Mollusca
- D) Arthropoda
- E) Echinodermata

28) Protostomes that have a closed circulatory system and obvious segmentation are part of which phylum?

- A) Cnidaria
- B) Annelida
- C) Mollusca
- D) Arthropoda
- E) Echinodermata