***Animal Diversity, 8e* (Hickman)**

**Chapter 7 Cnidarians and Ctenophores**

1) The traditional view of Cnidarians relative to germ layers is that Cnidaria possess

A) only one germ layer, the ectoderm, that differentiates into the two tissue layers.

B) two germ layers, ectoderm and mesoderm.

C) two germ layers, endoderm and mesoderm.

D) two germ layers, ectoderm and endoderm.

E) definitely all three germ layers including the mesoglea as it is derived from ectoderm.

Answer: D

2) Nematocysts are

A) widespread among the animal kingdom but first developed by Cnidaria.

B) formed and used only by Cnidaria although a few other organisms may "steal" them.

C) first found in sponges, most highly developed in cnidarians, but still found as remnants in some higher groups.

D) actually free-living symbionts that are most usually taken up by cnidarians, as are many green algae.

Answer: B

3) Which of the following is NOT a cnidarian?

A) Corals

B) Planaria

C) Sea anemones

D) Hydrozoa

E) Portuguese man-of-war

Answer: B

4) The \_\_\_\_\_\_\_\_ stage is best adapted for cnidarians living in colonies while the \_\_\_\_\_\_\_\_ stage helps in dispersal and survival in open oceans.

A) Gastrozooid, dactylozooid

B) Lappet, rhopalium

C) Medusa, polyp

D) Polyp, medusa

E) Dactylozooid, gastrozooid

Answer: D

5) Which of the following is NOT a correct description of cnidarian nervous tissues?

A) Hydrozoan medusae have ring nerves.

B) Scyphozoan medusae have marginal sense organs.

C) The nerve net synapses with both the nematocysts and the epitheliomuscular cells.

D) Cnidaria are the first animals to develop a central nervous system.

Answer: D

6) Cnidarians are found most abundantly in which of the following habitats?

A) Shallow marine habitats

B) Freshwater habitats

C) Deep ocean habitats

D) Estuary habitats

Answer: A

7) The unique feature(s) of a cnidarian nervous system is/are

A) vesicles with neurotransmitters located on both sides of the synapse.

B) nerve impulses are transmitted in both directions across a network of nerves.

C) cnidarian nerves lack any myelin surrounding the axons.

D) All of the choices are correct.

Answer: D

8) A hydra moves by

A) expelling water from the gastrovascular cavity.

B) contraction of the nerve net.

C) epitheliomuscular cells in the epidermis.

D) epitheliomuscular fibers in the mesoglea.

Answer: C

9) How does *Hydra* reproduce sexually?

A) The swimming medusa stages are male and female and the fertilized eggs develop into planula larvae that become *Hydra* polyps.

B) The polyp body wall can produce both ovaries and testes that make eggs and sperm, respectively.

C) Hydra sperm fertilize an egg in the body wall and this starts the growth of a bud.

D) Hydra do not reproduce sexually since they lost the sexual medusa stage.

Answer: B

10) Throughout most cnidarian groups, the basal or pedal disc serves to

A) be the base of the tentacles.

B) attach the cnidarian to the substrate.

C) perform extracellular digestion.

D) harbor sensory cells.

Answer: B

11) The class Hydrozoa contains *Hydra*, *Obelia*, and

A) the Portuguese man-of-war.

B) *Aurelia.*

C) the sea anemones.

D) most of the corals.

Answer: A

12) *Hydra* reproduces asexually by

A) buds.

B) nematocysts.

C) gland cells.

D) gametes.

E) gastrozooids.

Answer: A

13) Digestion in hydra is

A) intracellular only.

B) extracellular only.

C) both extracellular and intracellular.

D) neither extracellular nor intracellular.

Answer: C

14) The class of radiate animals with the most conspicuous medusa stage is

A) hydrozoa.

B) scyphozoa.

C) anthozoa.

D) cubozoa.

Answer: B

15) The correct sequence in the life cycle of the jellyfish *Aurelia* is

A) planula, ephyra, scyphistoma.

B) scyphistoma, planula, ephyra.

C) planula, scyphistoma, ephyra.

D) ephyra, planula, scyphistoma.

E) None of the choices are correct.

Answer: C

16) Which of the following is a characteristic of stauromedusans?

A) They have a solitary polyp body.

B) The top of the polyp has nine extensions.

C) The planula swims initially and then becomes sessile.

D) They do not have a mouth.

Answer: A

17) The function of the rhopalium is

A) digestive.

B) respiratory.

C) food capture.

D) sensory.

E) reproductive.

Answer: D

18) Sea anemones and corals lack

A) a sexual stage.

B) an asexual stage.

C) a polyp stage.

D) a medusa stage.

E) None of the choices are correct.

Answer: D

19) Which statement about Cnidaria is NOT true?

A) Reproduction is both sexual and asexual.

B) Some forms are sessile and others are motile.

C) They live in either marine or freshwater environments.

D) Tentacles are used to capture prey and put it into the mouth.

E) The body plan is tube-within-a-tube, with a distinct mouth and anus.

Answer: E

20) Nematocysts are stinging organelles contained inside cells called \_\_\_\_\_\_\_\_.

Answer: cnidocytes

21) The morphological type of cnidarian adapted to a sedentary or sessile life is the polyp, and the type best adapted for floating or free-swimming existence is the \_\_\_\_\_\_\_\_.

Answer: medusa

22) The body wall of a hydra consists of an outer epidermis and an inner gastrodermis with \_\_\_\_\_\_\_\_ between them.

Answer: mesoglea

23) Water in the gastrovascular cavity serves as a \_\_\_\_\_\_\_\_ skeleton.

Answer: hydrostatic

24) The small organs of equilibrium in scyphozoan jellyfishes are called \_\_\_\_\_\_\_\_, and these are borne in more complex sense organs called rhopalium.

Answer: statocysts

25) Though cnidarians are considered animals, they can make their own food and are nonpredatory.

Answer: FALSE

26) When considering cnidarian locomotion, which of the following statements are accurate?

A) Cnidarians are only mobile in the medusae stage of their life-cycle.

B) Cnidarians are only mobile in the polyp stage of their life-cycle.

C) Hydras and sea anemones can both move while in the polyp form.

D) None of the choices is correct.

Answer: C

27) Cnidarians are predators that digest their food in the gastrovascular cavity. Because this occurs inside cnidarian bodies it is considered intra-cellular digestion.

Answer: FALSE