

ANSWER

Round: 7A

1. Name the three urochordates shown below.

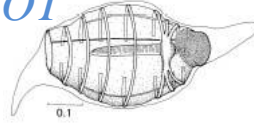
Larvacean OR

- a. *appendicularian*
(NOT lancelet 1 pt)



Salp or

- b. *pelagic*
tunicate (NOT doliolid) (1 pt)



ANSWER

Tunicate

- c. *OR sea*
squirt (1 pt)



2. Name the phylum in which these urochordates belong.

Chordata (Chordates is NOT acceptable – not the phylum name.)(1 pt)

3. List three (3) defining characteristics of the urochordates.

Accept any three (3) of the following; 1 pt each, 3 pts total:

- A notochord during some stage of the life cycle*
- A hollow, dorsal nerve cord*
- Pharyngeal slits during some stage of the life cycle*
- A muscular, post-anal tail*

4. Which characteristic also possessed by humans is indicated below?

Notochord (3 pt)



5. List whether each urochordate exhibits direct or indirect development.

a. direct (1 pt)

b. direct (1 pt)

c. indirect (1 pt)

6. List whether each urochordate can be found in pelagic habitats, benthic habitats or both.

a. pelagic (1 pt)

b. pelagic (1 pt)

c. both (1 pt)

7. Although they look very different, all three urochordates occupy similar niches in marine food webs. What is the main food source for all three of these urochordates and how do they capture food?

They all consume free-floating bacteria and phytoplankton (1 pt)

They filter feed OR they filter particles from the water (1 pt)

8. Of the urochordates depicted, which one displays neoteny? What is neoteny?

Organism "A" OR the larvacean OR the appendicularian (1 pt)

Neoteny is the retention of juvenile/larval characteristics in adult morphology (1 pt)

References:

- Brusca, R. C. and G. J. Brusca. 2003. Invertebrates, 2nd Edition. Sinauer Associates, Sunderland, MA, pp. 936.
- Smith, D.L. and Johnson, K.B. 1996 A Guide to Marine Coastal Plankton and Marine Invertebrate Larvae, 2nd Edition. Kendall/Hunt Publishing Company, Dubuque, IA, 221 pp.