

5.2 Classification & Cladistics

Question Paper

Course	DP IB Biology
Section	5. Evolution & Biodiversity
Topic	5.2 Classification & Cladistics
Difficulty	Easy

Time allowed: 10
Score: /5
Percentage: /100

Question 1

Which of the following is used by biologists around the world to name living organisms at the species level?

- A. Cladistics
- B. Phylogenetics
- C. The binomial system
- D. The three domain system

[1 mark]

Question 2

The onion plant, *Allium cepa*, and wild garlic, *Allium ursinum*, are flowering plants. Which of the following statements about onions and wild garlic are correct?

- A. Onions and wild garlic are in the same class and the same genus.
- B. Onions and wild garlic are in the same class and a different genus.
- C. Onions are in the order *cepa* and wild garlic is in the order *ursinum*.
- D. Onions and wild garlic both belong to the *Allium* family

[1 mark]

Question 3

Thysanozoon nigropapillosum, *Rhizostoma pulmo*, and *Deroceras agreste* are species of animal. *T. nigropapillosum* has bilateral symmetry and a single opening for mouth and anus. *R. pulmo* has radial symmetry, and *D. agreste* has bilateral symmetry and a single muscular foot. Which phyla in the table are correct for *T. nigropapillosum*, *R. pulmo*, and *D. agreste*?

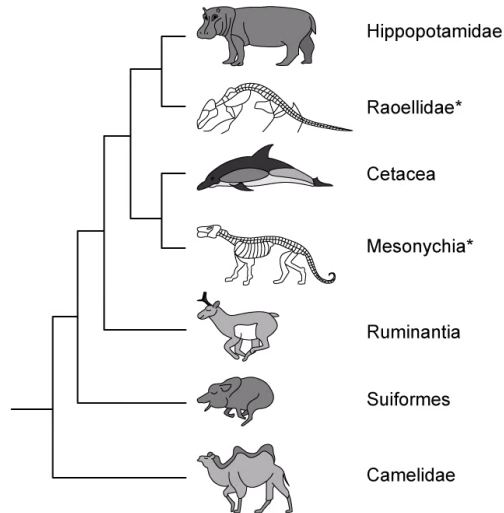
	<i>T. nigropapillosum</i>	<i>R. pulmo</i>	<i>D. agreste</i>
A.	Mollusca	Porifera	Arthropoda
B.	Annelida	Cnidaria	Platyhelminthes
C.	Platyhelminthes	Cnidaria	Mollusca
D.	Platyhelminthes	Porifera	Mollusca

[1 mark]

Question 4

The diagram shows a cladogram for part of the order artiodactyla.

* denotes a now extinct group.



To which group in the cladogram are the Cetacea most closely related?

- A. Hippopotamidae
- B. Raoellidae
- C. Ruminantia
- D. Mesonychia

[1 mark]

Question 5

Theories can change when new evidence emerges. Evidence relating to the evolutionary relationships between organisms can lead to their reclassification. What led to the reclassification of the figwort plant family?

- A. Observations about flower shape.
- B. The figwort family was too large.
- C. The figwort family formed a clade.
- D. Analysis of chloroplast DNA

[1 mark]