Laboratory 4
Animal Form and Function: The Arthropod Body Plan

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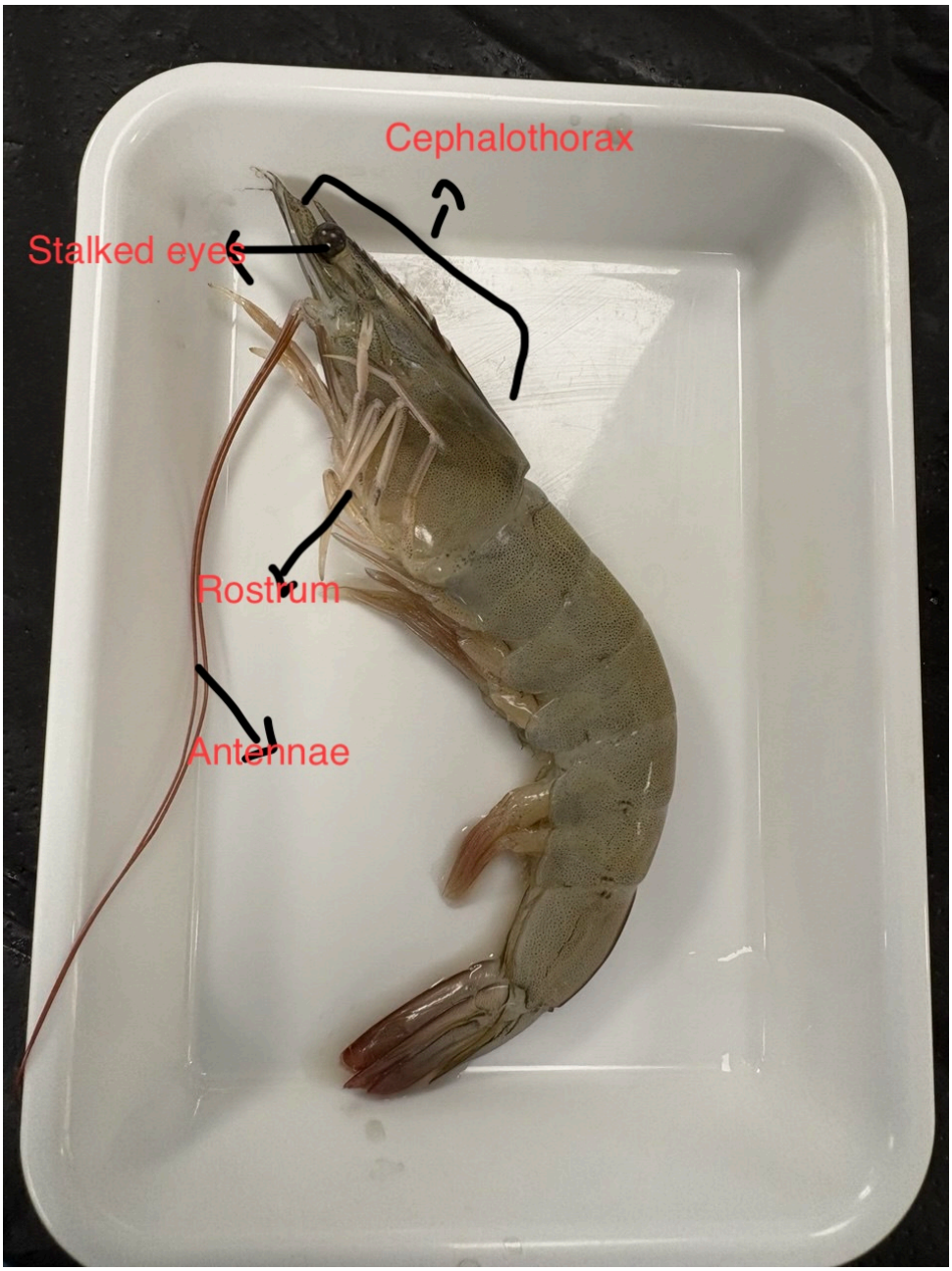
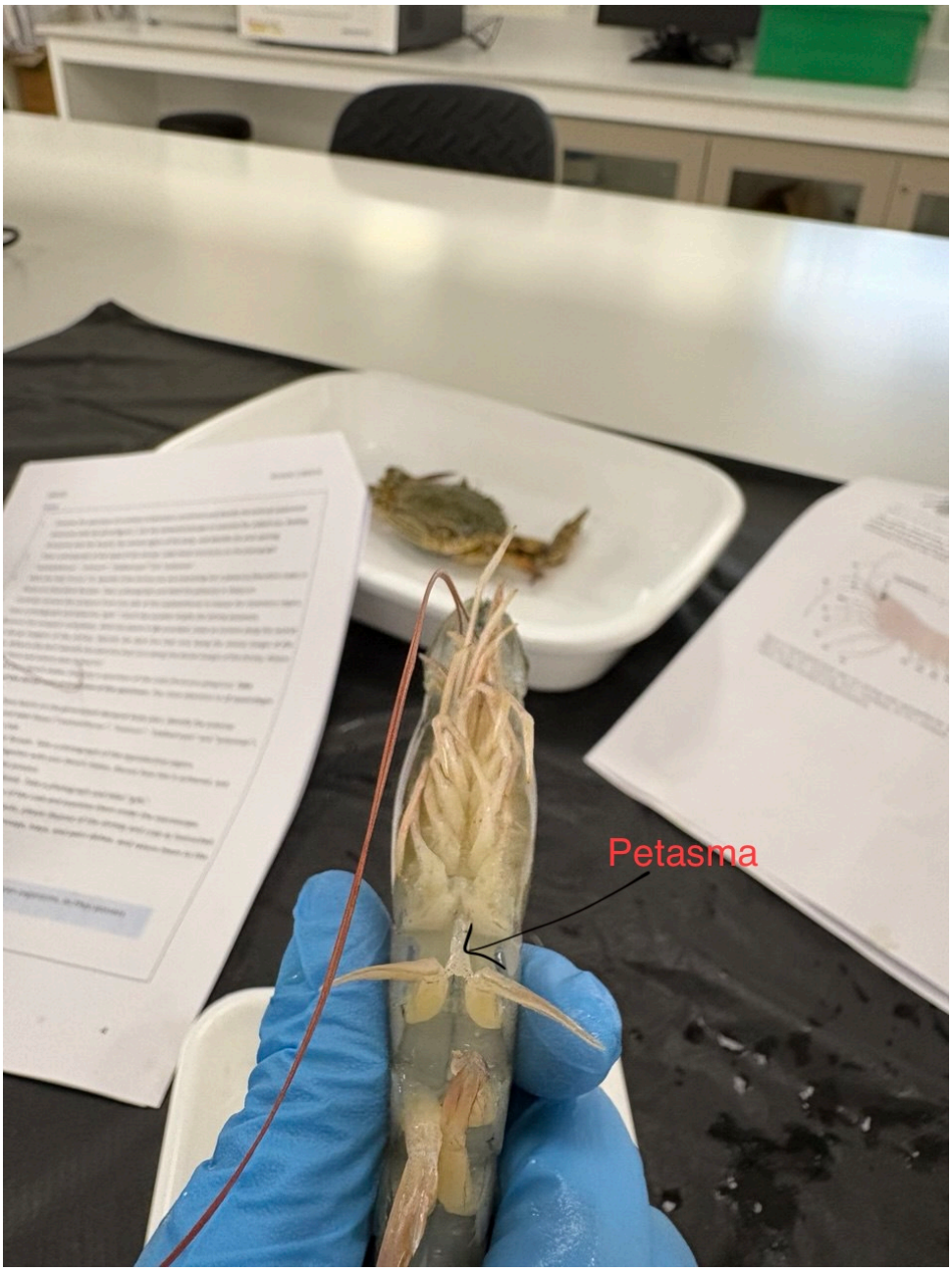
Question 1 **[2 marks]**



Question 2 **[2 marks]**



It is a male. There is a petasma here.

Question 3 **[1 mark]**

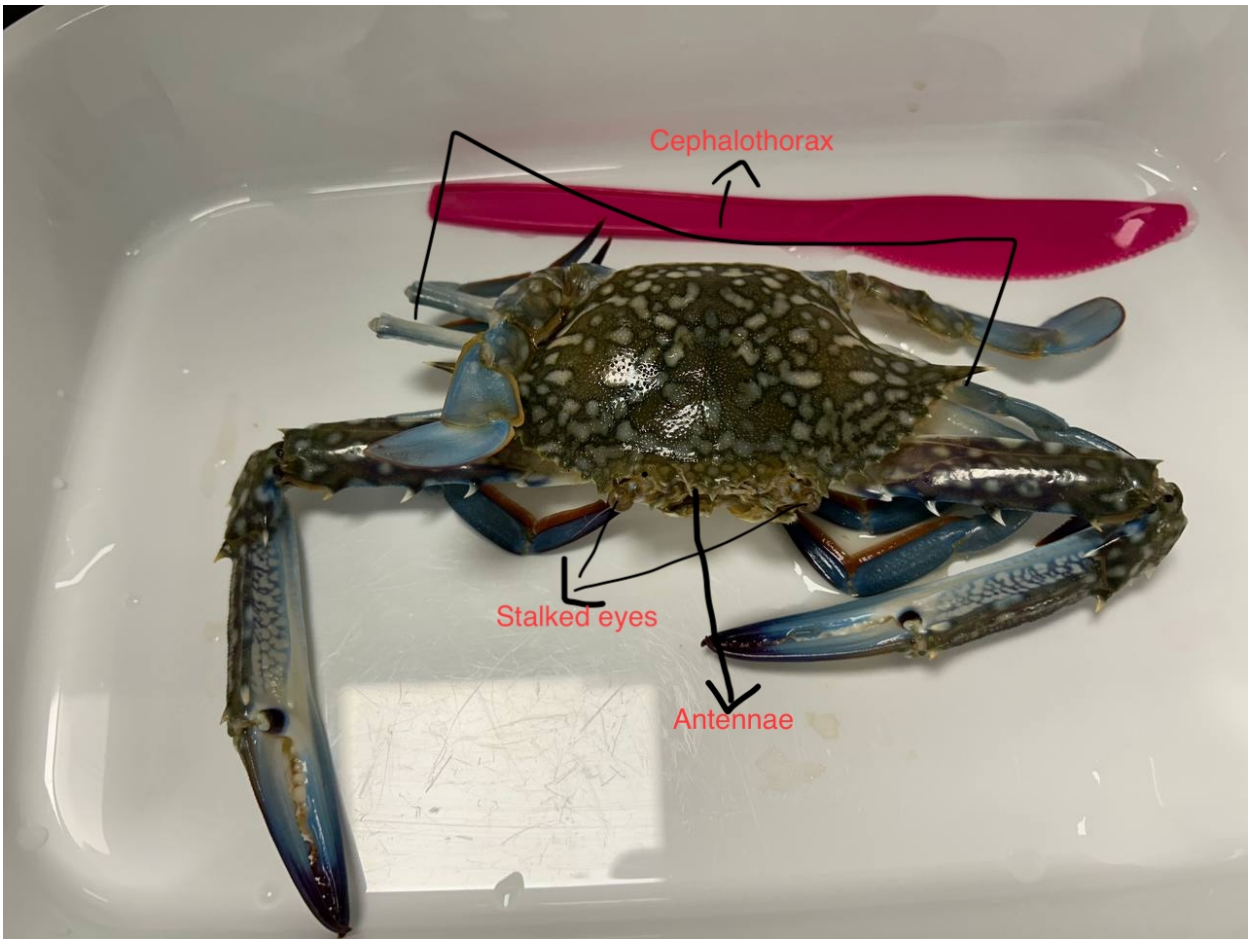
Question 4 **[1 mark]**

The dark line on the ventral side of the shrimp is the ventral nerve cord. It runs along the belly side of the shrimp and controls movement and reflexes.

Question 5 **[2 marks]**

The dark line along the dorsal side is the digestive tract . It starts at the stomach in the head region, and ends at the anus in the tail .

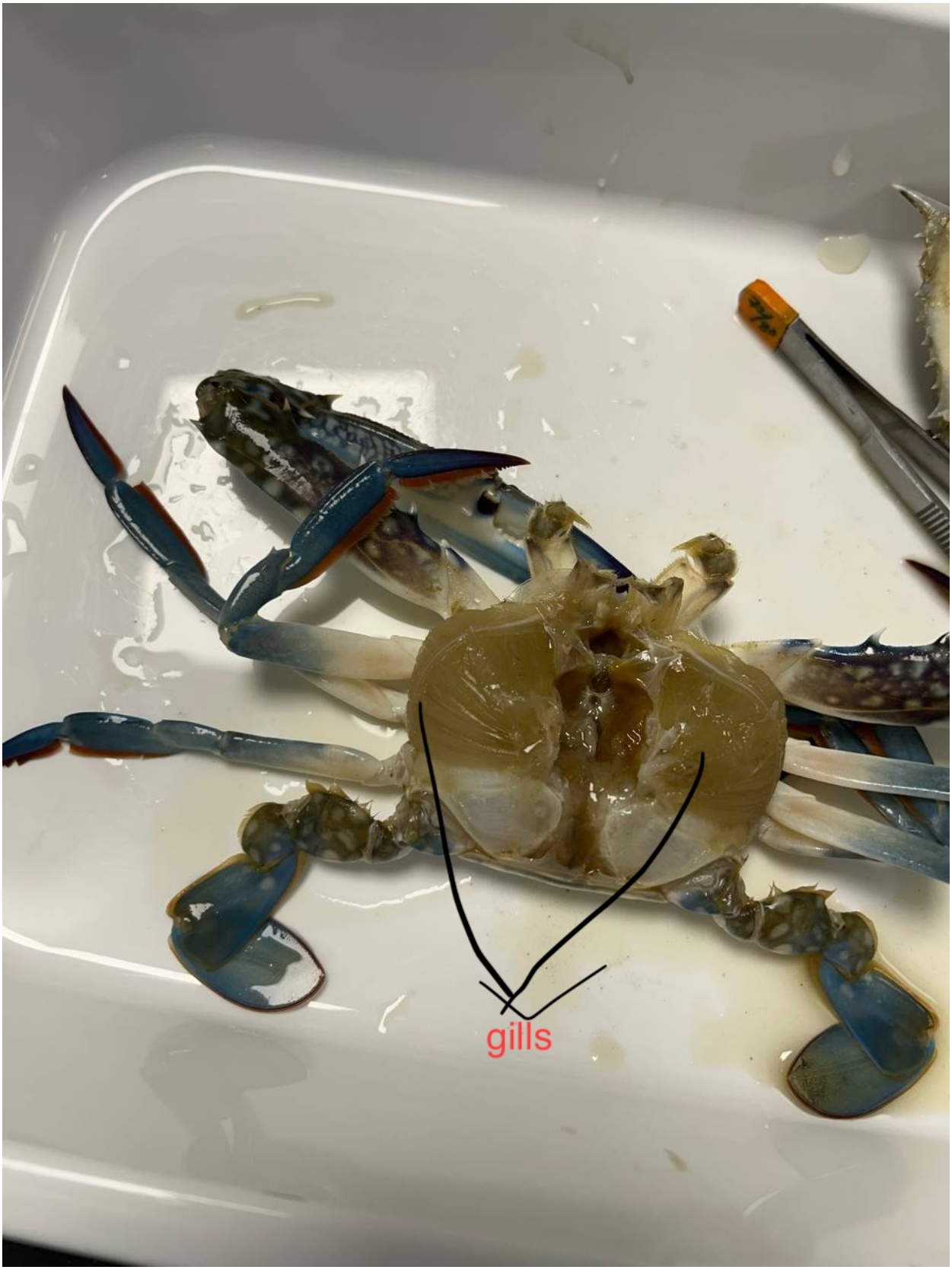
Question 6 **[2 marks]**



Question 7 **[2 marks]**

The crab dissected is male, identified by a narrow and pointed abdomen folded under the body.

Question 8 **[1 mark]**



Question 9 **[3 marks]**

General plan: The shrimp is adapted for swimming with its long abdomen and numerous flexible appendages.The crab is adapted for walking and protection with a broad, flattened body and strong claws.

Similarity: Both the shrimp and crab have a segmented body divided into a cephalothorax and abdomen, and both possess jointed appendages for movement and feeding.

Difference:
The shrimp has a long, flexible abdomen with swimming appendages adapted for swimming, while the crab has a short abdomen and sturdy walking legs adapted for crawling .

Question 10 **[4 marks]**

For Protection against predators and streamlining the body for movement through water.