SILICON VALLEY HIGH SCHOOL
END OF TERM ONE 2025

S.6 BIOLOGY

2Hours 10Minutes

Instructions : Attempt all questions

Question 1

You are provided with specimen K.

a) With the help of a hand lens , examine the head of the specimen .Using any four observable features on the head , explain how each of them enables the animal to survive in it's habitat .(04marks)

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b) View the interior part of the head using a hand lens . Draw and label. (11marks)

Tr. Male G 0708172458

c) Cut off the head of the specimen then cut one eye with as little tissue under it as possible. Place the eye on the slide with the cut side facing downwards/ View under the low power of a microscope .

    i)   Describe the arrangement of the units?(05marks)

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    ii)   Draw four adjacent eye units .Do not label.(06marks)

    iii)   What is the significance of the arrangement of the units? (02marks)

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Tr. Male G 0708172458

d) With the dorsal side upper most ,dissect the specimen to remove the digestive system .Display the structures remaining on the ventral cuticle .Draw and label. (12marks)

Question 2

You are provided with specimen B

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a)   Using a mortar and pestle , crush the whole specimen B , add $10cm^3$ of water to it and stir ; then decant the liquid part into a test tube.

   i)   Carryout tests for proteins ,starch and reducing sugar on the solution, using the reagent provided .Record your tests , observations and conclusions in table I   (10marks)

TABLE 1

Test	Specimen	Conclusion
Protein test		
Starch test		
Reducing sugar		

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ii)   To 5cm^3 of solution B , add 2cm^3 of solution Y provided. Incubate in a water bath at 35-40c^0 for 15 minutes. Repeat the tests in the table 1 above using the incubated mixture .Record your observations and conclusions
in the table below. (06marks)

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Test	Observation	Conclusion
Proteins		
Starch		
Reducing Sugars		

iii) From the results in (c) (ii) suggest the nature of solution Y (02marks)

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iv) State one property of solution Y by the results in (c) (ii). (02marks)

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