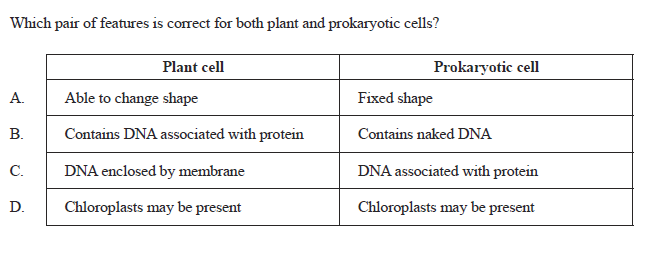
BIOLOGY  HL   Total   57                                            TIME  90 min

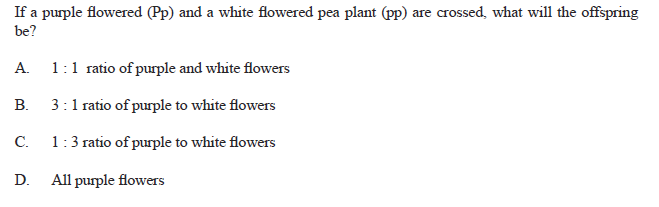
Section 1.

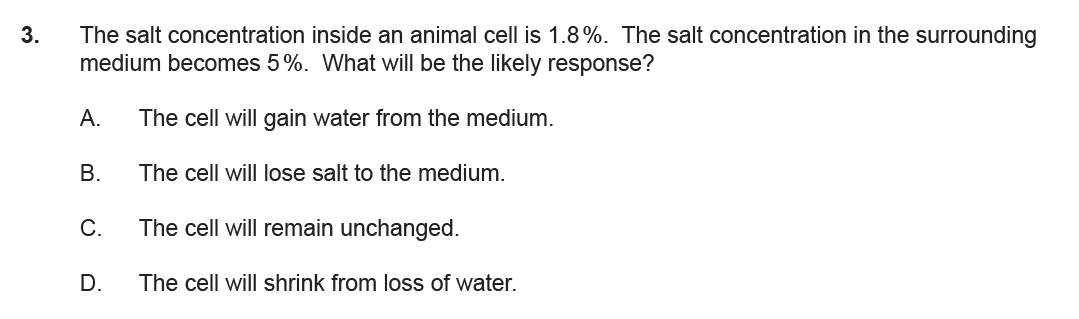
Each multiple choice question gives you one mark.

1.

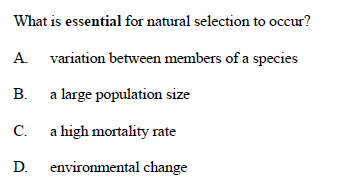


2.

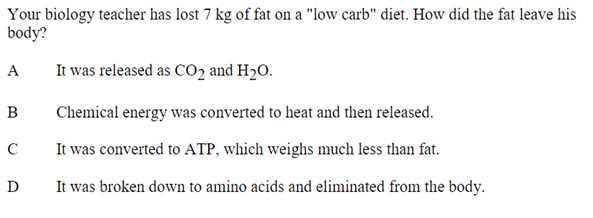




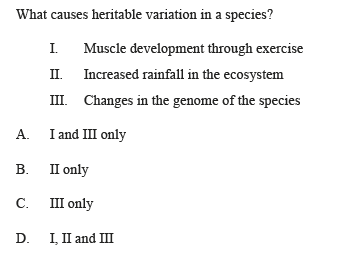
4



5.



6.



Section 2.

7. Organic compounds are made of chemical elements, which are therefore essential to living

organisms.

(a) State **three** most commonly occurring elements.**(1)**

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

 (b) Some organic compounds contain other elements. State **one** substance, or group of

substances, that contains:

1. nitrogen.

..................................................................................................................................... **(1)**

 (ii) phosphorus.

..................................................................................................................................... **(1)**

8.Describe the roles of proteins, fats, carbohydrates and nucleic acids in cells **(8)**

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

9.Explain the role of digestion in animal organisms.**(3)**

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

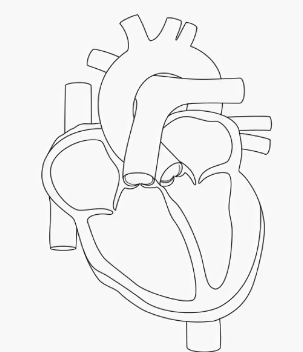
...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

...............................................................................................................................................

10. Label a simple diagram of the heart (in any language) **(4)**



11. Define the terms *gene* and *allele* and explain how they differ.                     **(3)**

........................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

12. Explain why it is important that in an ecosystem the populations of plants, herbivores and carnivores are balanced.   ………………………………………………………………………………………………………… **(4)**

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

13a. Draw and label the structure of an animal cell                                               **(6)**

13b. Compare cell structure in plants and animals                                              **(4)**

...............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

14a. What is a reflex in animals?                                                               **(2)**

.......................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

14b. Compare conditioned and unconditioned reflexes. What is the role of these reflexes in organisms?                                                                                                    **(4)**

.............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................. .........................................................................................

15. Colour-blindness can occur in men more often than in women. Explain this using Punnet grid

**(5)**

..............................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................

................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................................