

- 2.2 Study the diagram of four plant species below and answer the questions that follow.



- 2.2.1 What is this type of representation called? (1)
- 2.2.2 Which characteristic is found in the protea that is not found in the pine tree? (2)
- 2.2.3 During which period did the ancestor of the protea and the pine tree diverge (branched off)? (1)
- (4)

- 2.3 Study the sketches of plants below and answer the questions that follow.



- 2.3.1 Identify the plant groups under which plants A, B, C and D are classified. (4)
- 2.3.2 Identify the structure numbered 2. (1)
- 2.3.3 Plants B and C both produce seeds. Explain the importance of seeds for both these plants. (4)
- 2.3.4 Give a reason why plant A needs water for sexual reproduction. (2)
- (11)

- 2.4 Use your knowledge and compare the jelly fish, tapeworm and earthworm in a table regarding the following characteristics.
- 2.4.1 symmetry
- 2.4.2 coelom
- 2.4.3 blood system
- (10)

QUESTION 3

- 3.1 Read the passage below and answer the questions that follow.

Peat lands are special wetlands that play a very important role in ecology. A peat land, of approximately 6 000 years old, near Mafikeng is almost destroyed because of excessive extraction of water from the nearby Molepo river. The water is extracted for human consumption.

Peat lands like the one near Mafikeng is exceptional and play an important role in storing water as well as preventing climate changes.

Dr Phil-Louis Grundling said that carbon that is 'held' or 'stored' by peat lands combats climate change because it decreases the amount of carbon in the atmosphere.

Peat lands trap about one third of the world's carbon. Approximately 50% of wetlands worldwide are peat lands. However in South Africa about 10% of the wetlands are peat lands.

Grundling explained that peat lands can hold about 1 000 times its own mass in water. This replenishes the water table and is the source that keeps streams flowing. The "sponge effect" of the peat also makes it possible to store water that is then released during dry seasons.

Dr Grundling said that it might be too late to restore the peat land near Mafikeng but it might be possible to restore some parts of it if more water is supplied to this peat land.

The result of this destruction is depletion of the water table. The habitat of numerous fish and frog species that lived in this peat land was also destroyed.

From: *Beeld*, 24 September 2016.

- 3.1.1 Give TWO other reasons (not mentioned in the passage) that can lead to the destruction of wetlands. (2)
- 3.1.2 Discuss reasons from the passage regarding the importance of these specific wetlands for the environment. (4)
- 3.1.3 Suggest a way in which this peat land near Mafikeng can be restored. (2)
- (8)

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