

# Markscheme

①

asexual reproduction	Sexual reproduction
used by both unicellular & multicellular organisms produce offspring	
one individual only offspring genetically identical faster gametes not (usually) produced	two individuals (male & female) offspring genetically unique slower gametes produced

②

a) asexual reproduction (females only, no males)

b) any suitable advantage, such as:

females can reproduce without male sharks present

females can reproduce more quickly compared to sexual reproduction

c) any suitable advantage, such as:

offspring will show variation, some more likely to be adapted to changing environment

③

a) asexual reproduction (vegetative reproduction, runners)

b) offspring from asexual reproduction are genetically identical to their parent.

If the parent plant is growing well, the offspring from asexual reproduction are also likely to grow well as they will be in the same conditions as the parent plant. Offspring from sexual reproduction will vary, so some may not be so well suited to conditions that are near the parent plant

c) seeds from sexual reproduction are spread by animals and so are likely to be in different conditions from their parent plant. Variation in the offspring means that there is a greater chance that some offspring will be well adapted to the different conditions and so, grow well

④

a) The saw fish population was so small that the female parent might not have been able to find a mate

b) environmental conditions usually vary, so producing offspring that vary genetically increases the chance that some may be better adapted to the new conditions and so more likely to survive and reproduce