A-Level Biology Name: _____ Score: _____

1. The biological species concept defines a species as a group whose members:

   ☐ live in the same place

   ☐ have the same number of cells

   ☐ can breed together to produce fertile offspring

   ☐ simply look alike

2. The smallest, most specific group in the taxonomic hierarchy is the _____.

   _____

3. An ecosystem is:

   ☐ only the non-living environment

   ☐ all the living things in an area together with their non-living surroundings

   ☐ a single species

   ☐ a type of sampling

4. Which is a cause of extinction?

   ☐ higher biodiversity

   ☐ a larger gene pool

   ☐ random sampling

   ☐ loss and damage of a species' habitat

5. A group whose members can breed together to produce fertile _____ is a biological species.

   _____

6. Which level is the smallest, most closely related group?

   ☐ phylum

   ☐ class

   ☐ kingdom

   ☐ species

7. Biodiversity is measured at three levels: ecosystems/habitats, species/abundance, and:

   ☐ the soil pH

   ☐ genetic variation within each species

   ☐ the temperature

8. Conserving a species in its natural habitat (e.g. a nature reserve) is called _____ conservation.

   _____

9. Archaea and Bacteria are both prokaryotes, while Eukarya have a nucleus.

   ☐ True ☐ False

10. Two organisms in the same class are more closely related than two in the same genus.

    ☐ True ☐ False

1. **can breed together to produce fertile offspring**

   The biological concept uses interbreeding to produce fertile offspring; other concepts use appearance or ecological role.

2. **species**

   Domain → kingdom → phylum → class → order → family → genus → species.

3. **all the living things in an area together with their non-living surroundings**

   An ecosystem includes the living community and the abiotic surroundings; a niche is a species' role within it.

4. **loss and damage of a species' habitat**

   Habitat loss (plus climate change, competition and hunting) can drive a species extinct.

5. **offspring**

   A mule (horse × donkey) is sterile, so horses and donkeys are different species.

6. **species**

   Species is the most specific level; kingdom is the broadest.

7. **genetic variation within each species**

   The three levels are ecosystem diversity, species diversity (and abundance), and genetic diversity.

8. **in situ**

   In situ = in place (the habitat); ex situ = off-site (zoos, seed banks).

9. **True**

   The split into three domains is based on differences in their cells and genes, especially rRNA.

10. **False**

    False. Genus is lower in the hierarchy than class, so sharing a genus means a closer relationship than sharing only a class.