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| Aber Uni logo with 1872 | ENTRANCE SCHOLARSHIP EXAMINATION  **FEBRUARY 2023** |

# BIOLOGY 2: Organisms to Ecosystems

## Time Allowed – 1.5 hours

**3 questions should be attempted**

1. Biodiversity is at the forefront of global initiatives to protect the planet, but how can it be scientifically defined and measured?
2. Write a scientific essay on “Soil”.
3. Describe some examples of courtship or territorial displays in wild animals.
4. Do you have any wildlife identification skills (plant or animal), and if so, what guidance would you give to help other students?
5. What are the differences between ‘ecosystems’, ‘habitats’ and ‘communities’?
6. Discuss any aspect of marine or freshwater biology that inspires you.
7. How important are bacteria and fungi in ecosystems?
8. Tell us about any work experience that involved your biological knowledge.
9. Set out a plan for a real or imaginary ecological survey.
10. Describe one or more pathogens that cause disease in humans or other organisms.
11. Biology students are sometimes intimidated by statistical methods. Could you set out a simple guide for which tests should be applied to which types of biological data?
12. Why are more species found in tropical regions than at temperate latitudes?
13. Discuss vaccination as a medical strategy.
14. The study of human evolution has seen many major discoveries in recent years – are you able to review these?
15. How might the genetic composition of a population change over time?
16. What is meant by ‘innate’ and ‘learned’ behaviors?
17. Write an essay on the organisms of the Mesozoic Era.
18. To what extent do you think modern genetics will revolutionise medicine?