

BIOLOGY 2: Organisms to Ecosystems

Time Allowed – 1.5 hours

3 questions should be attempted

1. Explain the differences between ‘innate’ and ‘learned’ behaviours.
2. Discuss the various ways in which ‘biodiversity’ can be defined and assessed.
3. Consider how populations grow and the factors that can influence their growth.
4. Give some examples of parasites and diseases that they cause.
5. Describe with examples the hierarchical classification of organisms.
6. Discuss how the genetic composition of a population may vary over time.
7. Write an essay on (any aspect of) aquatic organisms.
8. Outline the classification of bacteria and the basic methods for their laboratory study.
9. Outline the roles of micro-organisms in ecological nutrient cycles.
10. Discuss nature conservation exemplified in a specific organisation, reserve or zoo.
11. What sort of problems can typically result from an unhealthy lifestyle?
12. What future contributions do you expect genetics to make to human health?
13. Describe in technical detail how you might conduct an ecological survey.
14. Explain the concepts of ‘ecosystems’, ‘habitats’ and ‘communities’.
15. Write an essay on any organism or taxonomic group in which you have a special interest.
16. Discuss any biological aspect of the food industry.
17. Write an essay on a famous biologist you admire.
18. Describe any statistical methods you have used for scientific purposes.