

## Entrance Examination March 2022

## **BIOLOGY 2: Organisms to Ecosystems**

Time allowed: 1.5 hours (90 minutes)

## **Answer THREE questions**

- 1. Write an essay on any biological aspect of Covid-19.
- 2. The term 'micro-organisms' can include both fungi and bacteria. What are the differences between them?
- 3. Do you think statistical methods are useful in biology, and can you give any examples?
- 4. Discuss courtship displays in (non-human) animals.
- 5. Write an essay on energy transfer in ecosystems.
- 6. Discuss the nature and biological importance of soil.
- 7. Write about a famous biologist of your choice.
- 8. Write an essay on any group(s) of organisms that live in water.
- 9. Everyone knows the term 'biodiversity', but can it be measured?
- 10. Write a biological essay on any aspect of the food industry.
- 11. Review some organisms that cause human or animal disease, and discuss methods to combat them.
- 12. By what processes do new species evolve?
- 13. What contributions do you expect genetics to make to human health in the future?
- 14. By now over 4800 exoplanets have been identified. Do you think we will obtain evidence for life on any of them, and if so how?

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- 15. What are the differences between 'parasitism' and 'symbiosis'?
- 16. Explain the concepts of 'ecosystems', 'habitats' and 'communities'.
- 17. Discuss how you would conduct an ecological survey.
- 18. Describe any conservation site or organisation with which you are familiar.

**END**