University of Toronto
National Biology Competition

2001 Examination
Answer Key

1. e	2. c	3. d	4. b	5. e
6. a	7. d	8. c	9. b	10. d
11. d	12. a	13. e	14. a	15. a
16. c	17. e	18. c	19. b	20. e
21. e	22. a	23. b	24. c	25. e
26. c	27. d	28. d	29. e	30. c
31. c	32. a	33. b	34. c	35. b
36. a	37. d	38. a	39. b	40. d
41. e	42. d	43. c	44. b	45. c
46. b	47. e	48. c	49. a	50. c

On the original test paper (May 2001) there were two correct responses in each of questions 7 and 38; these have been corrected on the online version of the test. This was unintentional. If a student selected either of the responses it was recorded as a correct response.

Question 7 asked "What is the difference between an acid and a base?". Response (d), "An acid releases H+ ions in solution, while a base accepts H+ ions," is the definition (the Brønsted-Lowry definitnion) used most often in biology. Credit was also given to students who selected (e), "An acid releases H+ ions in solution, while a base releases OH ions;" this definition (the Arrhenius definition) is often taught to students in general science classes.

In question 38, both (a) and (d) are correct statements (i.e, they would not help genetically-engineered humans to be able to run long distances faster at high altitudes). To be an incorrect statement (d) should have stated: "Decreasing the average size of the alveoli while keeping their total volume constant."