

DISCO Competition Heredity Answer Key

(All answers worth 1 point unless otherwise stated)

1. B
2. (2 pt) 32%
3. A
4. A
5. C
6. A
7. Cytosine
8. D
9. B
10. C
11. C
12. A
13. D
14. B
15. (2 pt) B
16. B
17. B
18. (2 pt) 100%
- 19.

	H	h
h	Hh	hh
h	Hh	hh

20. Genotypes: Hh, hh
Phenotypes: one horn, no horn
21. (2 pt, one pt each) DD, dd
22. (4 pt, one pt each) Black, short-hair: 3/8
Black, long-hair: 1/8
White, short-hair: 1/8
White, long-hair: 1/8
23. (2pt, one pt each) Mother: X^RX^r
Father: X^rY
24. A
25. O
26. tRNA, mRNA, rRNA
27. C
28. F
29. D
30. B

31. E

32. A

NOTE: For 33 and 35, Uracil and Thymine are both acceptable answers.

33. GC(U/T)AAAA(U/T)

34. ACUAGCUAU

35. AAAACCG(U/T)

36. (3 pt, 1 pt each) Section I: 2

Section II: 2, 4, 5

Section III: 1, 2, 3

37. (3 pt, 1 pt each) Section I: 1

Section II: 1, 3, 6

Section III: 4, 5, 6

38. Autosomal

39. B

40. B

41. Turner Syndrome

42. Deoxyribonucleic acid

43. C

44. (2 pt, 1 pt each) Cytosine (C), Thymine (T)

45. (2 pt, 1 pt each) AUG, to mark the site at which protein synthesis begins

46. (3 pt, 1 pt each) 13 years, 2003, it was a project to map out all human genomes

47. (2 pt, 1 pt each) Parents: Dd (NOTE: Any set of letters may be used, so Aa or Gg are also acceptable)

Children: Dd, dd

48. An inactive, "extra" X chromosome that is regarded as the diagnostic of genetic femaleness

Final score: ___/65