

# Computer Science Answer Key

## Cypress Woods, December 2013

1. D	11. D	21. B	31. D
2. B	12. A	22. D	32. C
3. D	13. A	23. C	33. C
4. D	14. C	24. D	34. A
5. E	15. A	25. A	35. B
6. C	16. C	26. C	36. B
7. D	17. A	27. E	37. D
8. B	18. E	28. E	38. B
9. C	19. C	29. A	39. A
10. B	20. C	30. C	40. E

### Notes:

26. Given  $n = \text{ar.length}$ , the runtime of `magic` is  $O(n+k)$ . However, since  $k=100$  is constant,  $O(n+100)=O(n)$ .

27. `magic` implements the counting sort algorithm.

32. The greedy quantifier `*` signifies zero or more.

The clause "Choose the most restrictive correct answer." is necessary because per the formal definition of Big O, an algorithm that is  $O(n^2)$  is also  $O(n^3)$ ,  $O(n^4)$ , and so forth.