

Exam 3 Solutions

1. C
2. D
3. C
4. No good answer provided- should be "coefficients & subscripts"
5. D
6. E
7. C
8. B
9. C
10. B
11. A
12. E
13. E
14. C
15. A
16. E- not a good question- would be modified/corrected
17. B
18. A
19. C
20. C
21. C
22. Fill in the missing data. /12 pts.

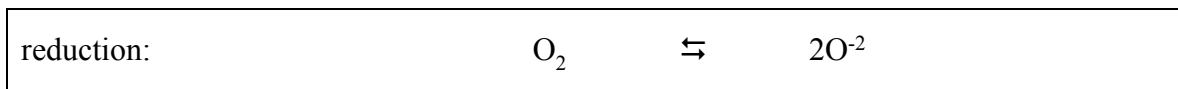
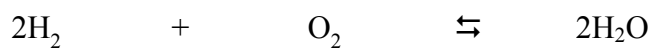
moles of sample	mass of sample	molecules of sample
2.50 mols of water (H ₂ O)	45.0 g of water	2.71 x 10 ²⁵ molecules of water
0.200 mol of sugar	36.0 g of a simple sugar (C ₆ H ₁₂ O ₆)	2.17 x 10 ²⁵ molecules of sugar
1.00 mol NaOH	40.0 g NaOH	6.02 x 10 ²³ atoms of lye (NaOH)

23. Fill in the table below with the missing information.

7 pts.

[H ₃ O ⁺] (M)	10 ⁻⁰	10 ⁻¹	10 ⁻²	10 ⁻³	10 ⁻⁴	10 ⁻⁵	10 ⁻⁶	10 ⁻⁷	10 ⁻⁸	10 ⁻⁹	10 ⁻¹⁰	10 ⁻¹¹	10 ⁻¹²	10 ⁻¹³	10 ⁻¹⁴
pH	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
pOH	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
[OH ⁻] (M)	10 ⁻¹⁴	10 ⁻¹³	10 ⁻¹²	10 ⁻¹¹	10 ⁻¹⁰	10 ⁻⁹	10 ⁻⁸	10 ⁻⁷	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³	10 ⁻²	10 ⁻¹	10 ⁻⁰

24. Balance the following reaction. Identify which is being oxidized and reduced by writing both of the half-reactions? /4 pts.



25. See notes

26. See notes

27. N/A