

LHA Jan 05 PS 416 Solutions

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

41. a. lots of energy released
 b. change in colour
 c. try to relight the powder to see if its chemical properties match those of the original.
42. (1) check for malleability(zinc is malleable)
 (2) check for a reaction with acid(zinc and acid will release hydrogen gas)

43.

Family	Common charge	What they react with
Alkali metals	+1	Halogens
Alkaline earth metals	+2	H ₂ O
Halogens	-1	metals
Inert(noble) gases	0	nothing

44. One part of aqueous magnesium hydroxide react with 1 part of aqueous sodium sulphide to produce 2 parts of aqueous sodium hydroxide and 1 part of solid magnesium sulphide.

45. $m = CV = 3 \text{ g/L} (0.250 \text{ L}) = 0.75 \text{ g}$
 Weigh 0.75 g of NaOH
 Dissolve in less than 250 ml in a beaker.
 Transfer to a volumetric flask and rinse beaker.
 Add water to the 250 mL mark and mix.