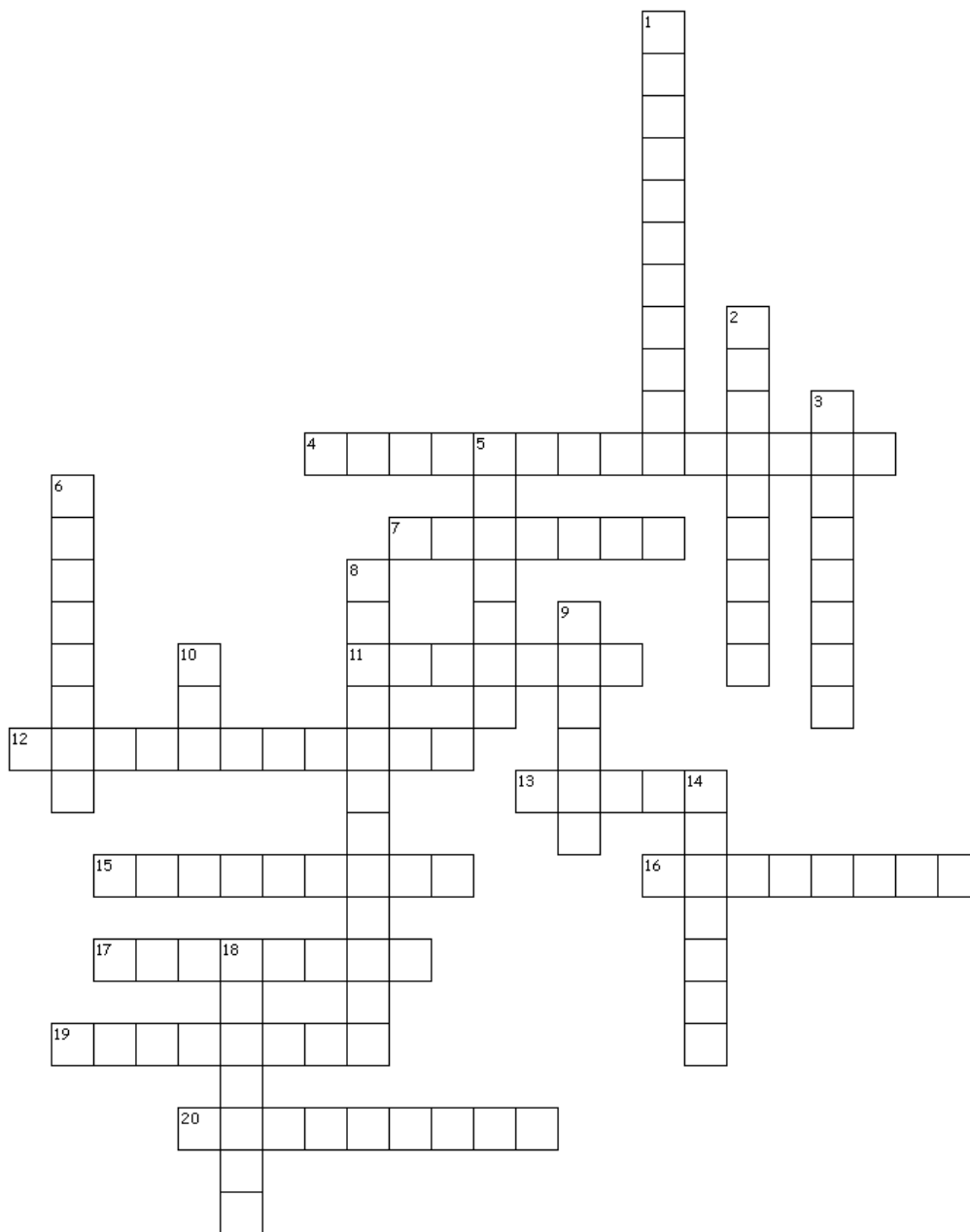


Question 1: fill in the following crossword using the following clue



Across

4. Various coloured components of red ink can be separated using this separation method
7. The element with symbol 'S'
11. _____ is the Latin name of tin
12. Solvent can be easily removed from insoluble solute (like sand and water)
13. Latin name of gold
15. Both iodine, and naphthalene has this property
16. Latin name of silver
17. This separation technique allows any iron substances to be removed from its mixture

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19. The smallest part of an atom
20. Husk of rice can be separated by this method of separation

Down

1. Groundnut and salt can be separated by this method
2. The Latin name of this element is kalium
3. A metal that has a chemical symbol 'Cr'
5. The process of converting a solid to a liquid
6. Common name of the element has a German name wolfram
8. A method by which a soluble salt is removed from its solvent to get pure solvent
9. _____ is the Latin name of copper
10. A charged element
14. A liquid metal at normal temperature that got its symbol from the Latin 'hydrargyrum', meaning liquid silver
18. The Latin name of sodium from which its symbol Na has come

Question 2: Balance the following equations

1. $\text{H}_2 + \text{O}_2 \longrightarrow \text{H}_2\text{O}$
2. $\text{S}_8 + \text{O}_2 \longrightarrow \text{SO}_3$
3. $\text{N}_2 + \text{O}_2 \longrightarrow \text{N}_2\text{O}$
4. $\text{HgO} \longrightarrow \text{Hg} + \text{O}_2$
5. $\text{CO}_2 + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{O}_2$
6. $\text{Zn} + \text{HCl} \longrightarrow \text{ZnCl}_2 + \text{H}_2$
7. $\text{SiCl}_4 + \text{H}_2\text{O} \longrightarrow \text{H}_4\text{SiO}_4 + \text{HCl}$
8. $\text{Na} + \text{H}_2\text{O} \longrightarrow \text{NaOH} + \text{H}_2$
9. $\text{H}_3\text{PO}_4 \longrightarrow \text{H}_4\text{P}_2\text{O}_7 + \text{H}_2\text{O}$
10. $\text{C}_{10}\text{H}_{16} + \text{Cl}_2 \longrightarrow \text{C} + \text{HCl}$
11. $\text{CO}_2 + \text{NH}_3 \longrightarrow \text{OC}(\text{NH}_2)_2 + \text{H}_2\text{O}$
12. $\text{Si}_2\text{H}_3 + \text{O}_2 \longrightarrow \text{SiO}_2 + \text{H}_2\text{O}$
13. $\text{Al}(\text{OH})_3 + \text{H}_2\text{SO}_4 \longrightarrow \text{Al}_2(\text{SO}_4)_3 + \text{H}_2\text{O}$
14. $\text{Fe} + \text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3$
15. $\text{Fe}_2(\text{SO}_4)_3 + \text{KOH} \longrightarrow \text{K}_2\text{SO}_4 + \text{Fe}(\text{OH})_3$
16. $\text{C}_7\text{H}_6\text{O}_2 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
17. $\text{H}_2\text{SO}_4 + \text{HI} \longrightarrow \text{H}_2\text{S} + \text{I}_2 + \text{H}_2\text{O}$
18. $\text{FeS}_2 + \text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3 + \text{SO}_2$
19. $\text{Al} + \text{FeO} \longrightarrow \text{Al}_2\text{O}_3 + \text{Fe}$
20. $\text{Fe}_2\text{O}_3 + \text{H}_2 \longrightarrow \text{Fe} + \text{H}_2\text{O}$
21. $\text{Na}_2\text{CO}_3 + \text{HCl} \longrightarrow \text{NaCl} + \text{H}_2\text{O} + \text{CO}_2$
22. $\text{K} + \text{Br}_2 \longrightarrow \text{KBr}$
23. $\text{P}_4 + \text{O}_2 \longrightarrow \text{P}_2\text{O}_5$
24. $\text{C}_2\text{H}_2 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
25. $\text{K}_2\text{O} + \text{H}_2\text{O} \longrightarrow \text{KOH} + \text{H}_2$

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26. $\text{H}_2\text{O}_2 \longrightarrow \text{H}_2\text{O} + \text{O}_2$
27. $\text{Al} + \text{O}_2 \longrightarrow \text{Al}_2\text{O}_3$
28. $\text{C}_7\text{H}_{16} + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
29. $\text{Na}_2\text{O}_2 + \text{H}_2\text{O} \longrightarrow \text{NaOH} + \text{O}_2$
30. $\text{SiO}_2 + \text{HF} \longrightarrow \text{SiF}_4 + \text{H}_2\text{O}$
31. $\text{C} + \text{H}_2\text{O} \longrightarrow \text{CO} + \text{H}_2$
32. $\text{KClO}_3 \longrightarrow \text{KCl} + \text{O}_2$
33. $\text{H}_3\text{AsO}_4 \longrightarrow \text{As}_2\text{O}_5 + \text{H}_2\text{O}$
34. $\text{KClO}_3 \longrightarrow \text{KClO}_4 + \text{KCl}$
35. $\text{Al}_2(\text{SO}_4)_3 + \text{Ca}(\text{OH})_2 \longrightarrow \text{Al}(\text{OH})_3 + \text{CaSO}_4$
36. $\text{P}_4\text{O}_{10} + \text{H}_2\text{O} \longrightarrow \text{H}_3\text{PO}_4$
37. $\text{FeCl}_3 + \text{NH}_4\text{OH} \longrightarrow \text{Fe}(\text{OH})_3 + \text{NH}_4\text{Cl}$
38. $\text{Sb} + \text{O}_2 \longrightarrow \text{Sb}_4\text{O}_6$
39. $\text{Ca}_3(\text{PO}_4)_2 + 6 \text{SiO}_2 \longrightarrow \text{P}_4\text{O}_{10} + \text{CaSiO}_3$
40. $\text{C}_3\text{H}_8 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
41. $\text{N}_2\text{O}_5 + \text{H}_2\text{O} \longrightarrow \text{HNO}_3$
42. $\text{Fe}_2\text{O}_3 + \text{CO} \longrightarrow \text{Fe} + \text{CO}_2$
43. $\text{Al} + \text{HCl} \longrightarrow \text{AlCl}_3 + \text{H}_2$
44. $\text{PCl}_5 + \text{H}_2\text{O} \longrightarrow \text{HCl} + \text{H}_3\text{PO}_4$
45. $\text{H}_3\text{BO}_3 \longrightarrow \text{H}_4\text{B}_6\text{O}_{11} + \text{H}_2\text{O}$
46. $\text{H}_2\text{S} + \text{Cl}_2 \longrightarrow \text{S}_8 + \text{HCl}$
47. $\text{Mg} + \text{N}_2 \longrightarrow \text{Mg}_3\text{N}_2$
48. $\text{Fe} + \text{H}_2\text{O} \longrightarrow \text{Fe}_3\text{O}_4 + \text{H}_2$
49. $\text{NaOH} + \text{Cl}_2 \longrightarrow \text{NaCl} + \text{NaOCl} + \text{H}_2\text{O}$