

## Unit 2 Review – The Nature of Matter

### COMBINED EXERCISES FOR INORGANIC NAMING

Write the correct name for each of the following.

- |   |  |   |  |
|---|--|---|--|
| 14. MgO   | 27. Na <sub>2</sub> SO <sub>3</sub>      | 40. Pt <sub>2</sub> O <sub>3</sub> ·3H <sub>2</sub> O | 53. Cu(NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O               |
| 15. CuSO <sub>4</sub>                                   | 28. Pb(HSO <sub>4</sub> ) <sub>4</sub>   | 41. PBr <sub>5</sub>                                  | 54. Co(ClO <sub>3</sub> ) <sub>2</sub>                                 |
| 16. NaCH <sub>3</sub> COO                               | 29. WF <sub>6</sub>                      | 42. Cu(CH <sub>3</sub> COO) <sub>2</sub>              | 55. Mn <sub>2</sub> O <sub>3</sub>                                     |
| 17. NH <sub>4</sub> NO <sub>2</sub>                     | 30. NaH <sub>2</sub> PO <sub>4</sub>     | 43. Al(ClO <sub>4</sub> ) <sub>3</sub>                | 56. Zn(CH <sub>3</sub> COO) <sub>2</sub>                               |
| 18. MoCl <sub>5</sub>                                   | 31. BaS                                  | 44. NH <sub>3</sub>                                   | 57. CH <sub>3</sub> COOH   |
| 19. LiOH·H <sub>2</sub> O                               | 32. NH <sub>4</sub> ClO <sub>2</sub>     | 45. Al <sub>2</sub> S <sub>3</sub>                    | 58. MnPO <sub>4</sub>  |
| 20. PtCl <sub>4</sub>                                   | 33. Fe(ClO) <sub>2</sub>                 | 46. NaOH  | 59. Cr(NO <sub>3</sub> ) <sub>3</sub> ·9H <sub>2</sub> O               |
| 21. NH <sub>4</sub> ClO <sub>4</sub>                    | 34. Sn(CN) <sub>2</sub>                  | 47. Ba(HS) <sub>2</sub> ·4H <sub>2</sub> O            | 60. Sr(ClO) <sub>2</sub>   |
| 22. AlN   | 35. KrF <sub>2</sub>                     | 48. N <sub>2</sub> O                                  | 61. VN   |
| 23. KMnO <sub>4</sub>                                   | 36. Na <sub>3</sub> PO <sub>4</sub>      | 49. HNO <sub>3</sub>                                  | 62. Pb(C <sub>2</sub> O <sub>4</sub> ) <sub>2</sub>                    |
| 24. Cu <sub>2</sub> SO <sub>4</sub>                     | 37. CaS                                  | 50. CsHCO <sub>3</sub>                                | 63. CoF <sub>3</sub>   |
| 25. H <sub>2</sub> SO <sub>4</sub>                      | 38. Mn(SCN) <sub>2</sub>                 | 51. Cu <sub>2</sub> S                                 | 64. BaSO <sub>3</sub>  |
| 26. Na <sub>2</sub> CO <sub>3</sub> ·10H <sub>2</sub> O | 39. AgMnO <sub>4</sub>                   | 52. C <sub>3</sub> S <sub>2</sub>                     | 65. CuCr <sub>2</sub> O <sub>7</sub>                                   |
| 66. Ni <sub>3</sub>                                     | 72. RaSO <sub>4</sub>                    | 78. PbCl <sub>4</sub>                                 | 84. XeO <sub>3</sub>   |
| 67. CrBr <sub>2</sub>                                   | 73. KHC <sub>2</sub> O <sub>4</sub>      | 79. Fe(HC <sub>2</sub> O <sub>4</sub> ) <sub>3</sub>  | 85. TiCl <sub>2</sub>  |
| 68. Mg <sub>3</sub> P <sub>2</sub>                      | 74. Cl <sub>2</sub> O                    | 80. I <sub>2</sub> O <sub>5</sub>                     | 86. HF   |
| 69. FeSO <sub>4</sub> ·5H <sub>2</sub> O                | 75. TiO <sub>2</sub>                     | 81. Hg(NO <sub>3</sub> ) <sub>2</sub>                 | 87. Sn(CrO <sub>4</sub> ) <sub>2</sub>                                 |
| 70. Ca(OH) <sub>2</sub>                                 | 76. NiSO <sub>4</sub> ·7H <sub>2</sub> O | 82. Zn(OH) <sub>2</sub>                               | 88. Co <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub> ·8H <sub>2</sub> O |
| 71. H <sub>3</sub> PO <sub>4</sub>                      | 77. Mg(ClO <sub>2</sub> ) <sub>2</sub>   | 83. H <sub>2</sub> S                                  | 89. PtS <sub>2</sub>   |

Write the chemical formula for each of the following.

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|-------------------------------------|-----------------------------------|
| 90. silver chloride                 | 127. sodium oxide                 |
| 91. sulphur dioxide                 | 128. barium phosphate             |
| 92. iron(III) oxalate               | 129. mercury(I) nitrate dihydrate |
| 93. beryllium oxide                 | 130. sodium hypochlorite          |
| 94. lead(II) acetate decahydrate    | 131. gold(I) cyanide              |
| 95. potassium chromate              | 132. tin(IV) bromide              |
| 96. mercury(I) acetate              | 133. hydroiodic acid              |
| 97. molybdenum(III) chloride        | 134. tetrasulphur tetranitride    |
| 98. ammonia                         | 135. iron(II) hydroxide           |
| 99. gold(III) sulphide              | 136. copper(I) fluoride           |
| 100. silver dichromate              | 137. tin(II) hydrogen carbonate   |
| 101. calcium acetate                | 138. dinitrogen pentoxide         |
| 102. chromium(III) oxalate          | 139. zinc hydrogen sulphite       |
| 103. calcium nitrite                | 140. zinc perchlorate hexahydrate |
| 104. difluorine dioxide             | 141. gold(III) nitrate            |
| 105. molybdenum(V) oxide            | 142. manganese(III) sulphate      |
| 106. silicon tetrafluoride          | 143. hydrochloric acid            |
| 107. cadmium(II) acetate            | 144. chromium(II) oxide           |
| 108. mercury(II) chloride           | 145. zinc hydrogen sulphide       |
| 109. lithium hydrogen sulphite      | 146. molybdenum(VI) sulphide      |
| 110. acetic acid                    | 147. iron(III) carbonate          |
| 111. magnesium chlorate hexahydrate | 148. iodine pentafluoride         |

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|--|---|
| 112. phosphorus trifluoride            | 149. manganese(IV) oxide                  |
| 113. copper(II) iodide                 | 150. hydrogen cyanide                     |
| 114. calcium nitride                   | 151. iron(III) sulphate nonahydrate       |
| 115. magnesium hydroxide               | 152. potassium nitrite                    |
| 116. molybdenum(V) sulphide trihydrate | 153. chromium(III) phosphide              |
| 117. iron(II) dihydrogen phosphate     | 154. nickel(II) hydroxide                 |
| 118. carbon tetraiodide                | 155. chlorine tetroxide                   |
| 119. zinc sulphate                     | 156. mercury(II) thiocyanate              |
| 120. mercury(I) sulphide               | 157. nitrous acid                         |
| 121. sulphurous acid                   | 158. lead(II) carbonate                   |
| 122. iron(II) fluoride octahydrate     | 159. sodium hydrogen oxalate              |
| 123. magnesium hydrogen sulphate       | 160. aluminum bromide hexahydrate         |
| 124. aluminum sulphide                 | 161. lead(II) iodide                      |
| 125. radium carbonate                  | 162. silver oxide                         |
| 126. xenon tetrafluoride               | 163. manganese(IV) monohydrogen phosphate |

5. Write the name of the following compounds.

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|----------------------------------|----------------------------------|---------------------------------|-------------------------------|-------------------------------|
| (a) $\text{Ag}_3\text{PO}_4$     | (e) $(\text{NH}_4)_2\text{CO}_3$ | (i) $(\text{NH}_4)_2\text{S}$   | (m) $\text{LiClO}_2$          | (q) $\text{SnO}_2$            |
| (b) $\text{Al}_2(\text{SO}_4)_3$ | (f) $\text{VCl}_3$               | (j) $\text{NH}_4\text{HCO}_3$   | (n) $\text{Na}_2\text{HPO}_4$ | (r) $\text{ZnCr}_2\text{O}_7$ |
| (c) $\text{Fe}_2\text{S}_3$      | (g) $\text{Hg}_2\text{CO}_3$     | (k) $\text{FeC}_2\text{O}_4$    | (o) $\text{Al}(\text{OH})_3$  | (s) $\text{V}_2\text{O}_5$    |
| (d) $\text{CuCl}$                | (h) $\text{CuSO}_4$              | (l) $\text{Mg}(\text{HSO}_3)_2$ | (p) $\text{CrI}_3$            | (t) $\text{Sr}_3\text{N}_2$   |

8. Name the following using the prefix-naming system.

- (a)  $\text{NO}_2$  (b)  $\text{ClF}_3$  (c)  $\text{S}_4\text{N}_2$  (d)  $\text{P}_2\text{O}_6$  (e)  $\text{N}_2\text{O}_3$  (f)  $\text{SF}_4$  (g)  $\text{BrF}$  (h)  $\text{SF}_6$

9. Write the formula for the following compounds.

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|------------------------------|--------------------------|---------------------------------|
| (a) sulphur trioxide         | (d) oxygen difluoride    | (g) tetraphosphorus trisulphide |
| (b) phosphorus pentachloride | (e) carbon monoxide      | (h) dinitrogen pentasulphide    |
| (c) xenon hexafluoride       | (f) carbon tetrachloride | (i) trisilicon tetranitride     |

6. Write the name of the following hydrated compounds.

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|--|---|--|
| (a) $\text{FeBr}_3 \cdot 6\text{H}_2\text{O}$                    | (d) $\text{CoF}_2 \cdot 4\text{H}_2\text{O}$          | (g) $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$    |
| (b) $\text{Li}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$ | (e) $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$ | (h) $\text{Ni}_3(\text{PO}_4)_2 \cdot 8\text{H}_2\text{O}$ |
| (c) $\text{Al}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$            | (f) $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$   | (i) $\text{MgHPO}_4 \cdot 7\text{H}_2\text{O}$             |

7. Write the formula for the following hydrated compounds.

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|--------------------------------------|--------------------------------------|
| (a) iron(III) phosphate octahydrate  | (d) chromium(II) oxalate monohydrate |
| (b) cadmium(II) nitrate tetrahydrate | (e) nickel(II) chloride hexahydrate  |
| (c) copper(II) phosphate trihydrate  | (f) aluminum nitrate nonahydrate     |