

Practice Questions for the Final Exam
Chem 1010

Here are 25 questions, some from each unit that we covered in class. The questions on the final will look just like these questions (but they won't be these exact questions!). If you can answer these questions correctly in 30 minutes, then you are well prepared for the final. If it takes longer than that, or you get some wrong answers, you need to review your learning guides and lecture notes some more before the exam!

(I have included the number and letter of the lecture with the answer to each question to help you know where you should have been able to find this information, but you are not required to give this on the exam!)

1. Give an example of an element that exists as diatomic molecules in its pure form. **hydrogen, nitrogen, oxygen, fluorine, chlorine, bromine, or iodine (1E)**
2. Give two reasons why a person might need extra protein in his/her diet. **growing child, pregnant, accident or injury, endurance athlete (4F)**
3. How can you recognize a water-soluble vitamin by looking at its line structure? **lots of functional groups (4G)**
4. How many valence electrons does silicon have? **four (2C)**
5. Give one example of a physical explosion. **popcorn, dry ice bomb, can of beans in a fire, etc (4B)**
6. What smell does methyl salicylate have? **wintergreen (2D)**
7. If an element has 25 protons, 26 neutrons, and 27 electrons, what charge does it have? **-2 (3A)**
8. If the particles in a substance go from a solid to a gas, what is this called? **sublimation (2A)**
9. Is kevlar a condensation or addition polymer? **condensation (3E)**
10. Name three things that are made mostly of calcium carbonate. **pearls, seashells, limestone, marble, stalactites, hard water deposits (3C)**
11. Name two elements named after a famous scientist. **einsteinium, rutherfordium, curium, etc (1C)**

12. Name two transition metals whose names begin with T. **tungsten, titanium, tantalum, technetium (1D)**
13. What compound does vinegar contain? **acetic acid (3C)**
14. What compound does silver react with when it tarnishes? **H₂S or hydrogen sulfide (3B)**
15. What elements are found in teflon? **carbon and fluorine (3F)**
16. What gas is produced when vinegar and baking soda mix? **carbon dioxide (3D)**
17. What is the formula for rhodium (III) carbonate? **Rh₂(CO₃)₃ (3A)**
18. What is the name of the compound with the formula C₂H₂ which produces a very hot flame when burned in oxygen? **acetylene (2C)**
19. How many elements are currently known to exist? **118 (1B)**
20. What sugar does maple syrup contain? **sucrose (4D)**
21. When tritium (³H) decays to helium (³He), what type of reaction has occurred? **a nuclear reaction (2B)**
22. What poisonous chemical will be produced when organic materials burn with insufficient oxygen? **carbon monoxide (4A)**
23. What product is made from the endosperm of a corn seed, and contains long chains of glucose connected together? **cornstarch (4C)**
24. When fats and oils are digested, what are they broken up into? **fatty acids (4E)**
25. About how hot is a candle flame? **1000°C (4A)**