Using Practice Quizzes Effectively

This practice quiz contains **actual questions** that have been asked on one of my quizzes in a previous quarter. This can be a useful studying tool if used properly.

Important notes about the practice quiz:

- This practice quiz should not be the only studying tool you are using, because **the practice quizzes only show a small subset of the possible questions that could be tested**.
- **Work the recommended book problems** to make sure that you fully understand all of the concepts that might be on the actual quiz.
    - You need to be able to **explain why every step is done** in solving all of the recommended book problems (**without looking at the solutions**). Do not memorize the answers – this will not work.
    - Work problems multiple times to build skill and efficiency (but do not memorize).
- **The actual quiz will contain questions that differ from the practice quizzes. They are not necessarily any easier or harder; they are just different.**
    - It would be pointless to give a quiz with the exact same questions as the practice, because it would mean the quiz is testing your memorization skills instead of your actual understanding of the material.
    - **To prepare for this, make sure you understand how to do all of the recommended book problems as discussed above.**

What this practice quiz is intended to do:

- Help you diagnose general areas of strength/weakness and determine what you need to spend more time studying before the quiz
- Allow you to check if you are answering questions quickly enough to complete the actual quiz within the time limit
- Give you an idea of the general format of a multiple-choice quiz

While taking the quiz:

- Take this with a **25 minute time limit**, including the time it would take you to fill out a parscore
- **Do not use any outside notes or help**
- Do not look at any of the answers until you have completed the entire quiz

After you complete the quiz, check your answers against the key. For any problems you miss:

- Go through the worked-out solutions to see how to answer each question correctly
- **Make sure you understand why every step is done** in solving the problems you miss
- **Rework book problems** that are related to the questions you missed. This will help to strengthen your understanding of the topic. Without this, you will not gain a full understanding of the topic and risk missing similar questions on the actual quiz.

Before doing anything, fill in the following on your ParSCORE form:

1) **Write your name**
2) Bubble in **FORM A**
3) **Bubble in your PERM** number (7 digits only—no extra numbers)

Instructions: No hats or hoods allowed. No books or notes allowed. No sharing of calculators. Cell phones, iPods, headsets/headphones, and any other electronic devices must be turned off and put away.

There are a total of three pages (6 questions) on the quiz. **Not every question is worth the same number of points**--point values are indicated for each question.

You may work out the problems and write your answers on this quiz; however, you must completely fill in the appropriate bubble(s) on your ParSCORE form. Turn in the ParSCORE form only. **Only the answers indicated on your ParSCORE will be graded**, so please be very careful bubbling in your ParSCORE. No credit will be awarded for an incorrectly-bubbled answer. The correct answers to the quiz will be posted on our course web page.

1. (3 pts) Barium forms a stable ionic compound with the formula BaX, where X is an unknown anion. Determine the formula of the ionic compound formed when the Fe^{3+} ion combines with X. Assume the charge of X is the same in both compounds.

a) FeX
b) FeX_3
c) Fe_3X_2
d) Fe_2X_3
e) Fe_3X

2. (3 pts) Determine the SUM of ALL coefficients when the following equation is properly balanced with lowest whole-number coefficients. Be sure to include coefficients of 1 (if there are any).

$$Al + HCl \rightarrow AlCl_3 + H_2$$

a) 4
b) 13
c) 6
d) 26
e) 7

3. (3 pts) For a particular element, 67.06% is an isotope with a molar mass of 280.5 g/mol, 2.94% is an isotope with a molar mass of 283.8 g/mol, and 30.00% is an isotope with a molar mass of 284.9 g/mol. Calculate the average molar mass of this element.

a) 283.1 g/mol
b) 849.2 g/mol
c) 281.9 g/mol
d) 280.5 g/mol
e) 313.2 g/mol

4. (3 pts) Which of the following statements is **correct** according to the naming conventions discussed in class and in the textbook?

a) CrS is chromium(I) sulfide
b) $Ca_3(PO_4)_2$ is tricalcium diphosphate
c) $HClO_2$ is hydrochlorous acid
d) More than one of these statements are correct
e) None of these statements are correct

There are two more questions on the last page --->

5. (4 pts) A single molecule of A_2F, where A is an unknown element, weighs 3.50×10^{-22} g. Determine the molar mass of element A.

a) 95.8 g/mol
b) 191.6 g/mol
c) 1.59×10^{-22} g/mol
d) 3.18×10^{-22} g/mol
e) 47.9 g/mol

$$mr(A_2F) = 3.5 \times 10^{-22} \times 6.02 \times 10^{23}$$

$$\frac{mr(A_2F) - mr(F)}{2} \Rightarrow A$$

6. (4 pts) Determine the mass of SO_3 that can actually be produced when 175 grams of SO_2 reacts with 35.0 grams of O_2 according to the balanced equation shown below. Assume the reaction has a 73.0% yield.

$$2\ SO_2 + O_2 \rightarrow 2\ SO_3$$

a) 219 g
b) 175 g
c) 160 g
d) 63.9 g
e) 128 g

73% × E(m)

∀ E(m) find by finding limiting reactant, ⇒ Expected product mole E(n)

$E(m) = E(n) \times mr(SO_3)$

E

Answers: 1) D 2) B 3) C 4) E 5) A 6) E