065 Extra Credit Practice Exam

This is a practice exam that will be representative of the types of questions that you will need to answer on the extra credit exam/project. Thus, this practice exam is for your own knowledge and it is not to be turned in for credit.

1. How many cm are in 57.0 in?

a. 22 cm b. 0.0445 cm c. 145 cm d. 22.4 cm

2. Which of the following is the basic unit of volume in the metric system?

a. liter b. kilogram c. meter d. gallon

3. How many significant figures are in the number 0.00208?

a. six b. two c. three d. four

4. When 2610 + 11.7 + 0.22 are added, the answer to the correct number of significant figures is:

a. 2621.92 b. 2621.9 c. 2621 d. 2622

5. One cup of kidney beans contains 15 g of protein, 1 g of fat, and 42 g of carbohydrate. How many kilocalories, to two significant figures, does this sample contain?

a. 60 kcal b. 88 kcal c. 230 kcal d. 240 kcal

6. A nutritional calorie (Cal) is equal to:

a. 1000 kilocalories b. 1000 calories c. 100 calories d. 1 calorie

7. How many calories are required to increase the temperature of 13 g of alcohol from 11 °C to 23 °C? The specific heat of alcohol is 0.58 cal/g°C.

a. 83 cal b. 0.63 cal c. 90 cal d. 0.54 cal

8. What is the mass number of an atom of aluminum, that has 14 neutrons?

a. 13 b. 19 c. 27 d. 32

9. Identify the noble gas in the following list:

a. helium b. nitrogen c. oxygen d. gold

10. The number of valence electrons found in an atom of a Group A element is equal to:

a. its atomic number b. its atomic mass c. its group number d. eight

11. The ion of aluminum is:

a. Al^{+} b. Al^{2+} c. Al^{3+} d. Al^{3-}

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12. The formula for a molecule formed from N and Cl would be:

a. NCl b. NCl_2 c. NCl_3 d. N_3Cl

13. What is the formula for aluminum nitrate?

a. Al_2NO_2 b. $AlNO_3$ c. $Al(NO_2)_3$ d. $Al(NO_3)_3$

14. In the following reaction, what is the correct coefficient for aluminum chloride?

$$Al + Cl_2 \rightarrow AlCl_3$$

a. 1 b. 2 c. 3 d. 4

15. What is the classification for this reaction?

$$2C + O_2 \rightarrow 2CO$$

a. single replacement b. double replacement c. combination d. decomposition

16. How many moles of carbon are there in 0.500 moles of C_2H_6?

a. 0.500 moles b. 1.00 moles c. 3.00 moles d. 4.00 moles

17. The pressure of 5.0 L of gas increases from 1.50 atm to 1249 mmHg. What is the final volume of the gas, assuming constant temperature?

a. 4100L b. 5.0 L c. 5.4 L d. 4.6 L

18. How many moles of neon occupy a volume of 14.3 L at STP?

a. 36.7 moles b. 32.0 moles c. 6.45 moles d. 0.638 moles

19. What is the molarity of a solution that contains 17 g of NH_3 in 0.50 L of solution?

a. 34 M b. 2.0 M c. 0.50 M d. 0.029 M

20. What is the (m/v)% of KOH when 5.78 g of KOH are dissolved into 250 mL of water?

a. 7.3 % b. 2.3 % c. 5.0 % d. 1.6 %

***Bring a scantron and a number 2 pencil to the extra credit project. The extra credit exam is 50 questions long.*