Assessment

Chemistry: Lesson 13

Question 1

$C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O$

the molar masses: $C_3H_8 = 44.0$, $O_2 = 32.0$, $CO_2 = 44.0$, $H_2O = 18.0$

10 mol O_2 with an excess of C_3H_8 should produce _____ mol CO_2.

A. 3

B. 4

C. 5

D. 6

Question 2

$C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O$

the molar masses: $C_3H_8 = 44.0$, $O_2 = 32.0$, $CO_2 = 44.0$, $H_2O = 18.0$

44.0 g C_3H_8 with an excess of O_2 yields _____ g CO_2.

A. 44.0

B. 88.0

C. 132

D. 176

Question 3

$C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O$

the molar masses: $C_3H_8 = 44.0$, $O_2 = 32.0$, $CO_2 = 44.0$, $H_2O = 18.0$

A yield of 66 g CO_2 should also yield _____ g H_2O.

A. 18

B. 36

C. 54

D. 72

Question 4

$4Al + 3O_2 \rightarrow 2Al_2O_3$

the molar masses: Al = 27.0, O_2 = 32.0, Al_2O_3 = 102.0

108 g Al needs _____ g O_2 without either one being a limiting reactant.

A. 96.0

B. 102.0

C. 108.0

D. 114.0

Question 5

$4Al + 3O_2 \rightarrow 2Al_2O_3$

the molar masses: Al = 27.0, O_2 = 32.0, Al_2O_3 = 102.0

54.0 g Al with an excess of O_2 yields _____ g Al_2O_3.

A. 102.0

B. 204.0

C. 76.5

D. 51.0

Question 6

$4Al + 3O_2 \rightarrow 2Al_2O_3$ the molar masses:

Al = 27.0, O_2 = 32.0, Al_2O_3 = 102.0 To make 51.0 g Al_2O_3, we need _____ g Al.

A. 108.0

B. 51.0

C. 27.0

D. 20.0

Question 7

Stoichiometry is a comparison of quantities in reactions.

A. True

B. False

Question 9

Percent yield = (theoretical yield/actual yield) × 100.

A. True

B. False

Question 10

Mass of a reactant : mass of a product cannot be compared without changing the masses to moles.

A. True

B. False