

Name _____

Please read all the questions VERY carefully before answering. No outside paper is allowed.
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) A plastic block has dimensions of 2.2 cm x 3.0 cm x 1.5 cm and a mass of 12.4 grams. Will the block float in water and why? 1) _____
A) Yes, because the density of the block is 0.80 g/mL which is less than the density of water.
B) No, because the density of the block is 1.3 g/mL which is greater than the density of water.
C) No, because the density of the block is 0.80 g/mL which is greater than the density of water.
D) Yes, because the density of the block is 1.3 g/mL which is less than the density of water.
E) none of the above
- 2) Which one of the following substances will float in gasoline, which has a density of 0.66 g/mL? 2) _____
A) aluminum (density = 2.70 g/mL)
B) table salt (density = 2.16 g/mL)
C) balsa wood (density = 0.16 g/mL)
D) sugar (density = 1.59 g/mL)
E) mercury (density = 13.6 g/mL)
- 3) A nugget of gold with a mass of 521 g is added to 50.0 mL of water. The water level rises to a volume of 77.0 mL. What is the density of the gold? 3) _____
A) 1.00 g/mL
B) 6.77 g/mL
C) 10.4 g/mL
D) 19.3 g/mL
E) 0.0518 g/mL
- 4) What is the mass of 2.00 L of an intravenous glucose solution with a density of 1.15 g/mL? 4) _____
A) 1.15 kg B) 0.023 kg C) 2.30 kg D) 0.58 kg E) 0.015 kg
- 5) Diamond has a density of 3.52 g/mL. What is the volume in cubic centimeters of a diamond with a mass of 15.1 g? 5) _____
A) 4.29 cm³ B) 53 cm³ C) 4.3 cm³ D) 53.2 cm³ E) 0.233 cm³
- 6) Which of the following statements is FALSE? 6) _____
A) Mixtures may be composed of two or more elements, two or more compounds, or a combination of both.
B) A pure substance may either be an element or a compound.
C) A mixture may be either homogeneous or heterogeneous.
D) Matter may be a pure substance or it may be a mixture.
E) All of the above statements are true.

- 7) A solution is an example of a (an) _____
A) heterogeneous mixture
B) compound
C) homogeneous mixture
D) element
E) pure substance
- 8) A binary mixture of silver bromide (AgBr) and potassium bromide (KBr) weighing 2.18 g was extracted with water to dissolve and filter out KBr. The remaining solid was collected on filter paper weighing 0.88 g. When dried, the mass of paper plus the dry AgBr was 1.82 g. The filtrate was collected in a beaker weighing 69.15 g. After evaporation and cooling, the beaker plus the residue weighed 70.33 g. Calculate the mass of AgBr recovered. _____
A) 0.094 g B) 1.94 g C) 0.24 g D) 0.94 g
- 9) A binary mixture of silver bromide (AgBr) and potassium bromide (KBr) weighing 2.18 g was extracted with water to dissolve and filter out KBr. The remaining solid was collected on filter paper weighing 0.88 g. When dried, the mass of paper plus the dry AgBr was 1.82 g. The filtrate was collected in a beaker weighing 69.15 g. After evaporation and cooling, the beaker plus the residue weighed 70.33 g. Calculate the mass of KBr recovered. _____
A) 0.18 g B) 0.94 g C) 1.18 g D) 0.018 g
- 10) A binary mixture of silver bromide (AgBr) and potassium bromide (KBr) weighing 2.18 g was extracted with water to dissolve and filter out KBr. The remaining solid was collected on filter paper weighing 0.88 g. When dried, the mass of paper plus the dry AgBr was 1.82 g. The filtrate was collected in a beaker weighing 69.15 g. After evaporation and cooling, the beaker plus the residue weighed 70.33 g. Calculate the % of AgBr in the mixture. _____
A) 43 % B) 75 % C) 28 % D) 0.43 %
- 11) A binary mixture of silver bromide (AgBr) and potassium bromide (KBr) weighing 2.18 g was extracted with water to dissolve and filter out KBr. The remaining solid was collected on filter paper weighing 0.88 g. When dried, the mass of paper plus the dry AgBr was 1.82 g. The filtrate was collected in a beaker weighing 69.15 g. After evaporation and cooling, the beaker plus the residue weighed 70.33 g. Calculate the % of KBr recovered. _____
A) 43 % B) 64 % C) 54 % D) 24 %
- 12) A binary mixture of silver bromide (AgBr) and potassium bromide (KBr) weighing 2.18 g was extracted with water to dissolve and filter out KBr. The remaining solid was collected on filter paper weighing 0.88 g. When dried, the mass of paper plus the dry AgBr was 1.82 g. The filtrate was collected in a beaker weighing 69.15 g. After evaporation and cooling, the beaker plus the residue weighed 70.33 g. Calculate the percent recovery of the mixture components. _____
A) 43 % B) 97 % C) 64 % D) 24 %
- 13) Mass of a clean, dry crucible is 10.427 g. The mass of the crucible after addition of a hydrate salt is 12.179 g. After heating, the crucible plus solid residue weighed 11.459 g. Calculate the mass of hydrate heated. _____
A) 0.752 g B) 3.752 g C) 1.752 g D) 1.152 g

14) Mass of a clean, dry crucible is 10.427 g. The mass of the crucible after addition of a hydrate salt is 12.179 g. After heating, the crucible plus solid residue weighed 11.459 g. Calculate the mass of water in the hydrate sample. 14) _____
A) 0.720 g B) 1.752 g C) 3.752 g D) 0.072 g

15) Mass of a clean, dry crucible is 10.427 g. The mass of the crucible after addition of a hydrate salt is 12.179 g. After heating, the crucible plus solid residue weighed 11.459 g. Calculate the percent of water in the hydrate sample. 15) _____
A) 0.72 % B) 58.9 % C) 41.1 % D) 21.7 %

Answer Key

Testname: FH_CHEM25_SP08_LABQUIZ1

- 1) B
- 2) C
- 3) D
- 4) C
- 5) A
- 6) E
- 7) C
- 8) D
- 9) C
- 10) A
- 11) C
- 12) B
- 13) C
- 14) A
- 15) C