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Unit 1 - How to access the portal

Assignment 0

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2018-08-07, 23:59 IST.

1) The density of water (in g/cc) at NTP is *1 point*

- a) 0.997
- b) 1.0
- c) 1.1
- d) 0.75

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) 0.997

2) Which of the following is correct? *1 point*

- a) At a fixed temperature the density of water will increase with increase in concentration of dissolved solids
- b) At fixed temperature, the density of water will increase with decrease in pressure
- c) At a fixed temperature, the density of water will decrease with increase in concentration of dissolved solids
- d) At fixed temperature, the density remains unchanged with variation of pressure

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) At a fixed temperature the density of water will increase with increase in concentration of dissolved so

3) What will happen to the freezing point of water if increasing amount of NaCl is dissolved in it? *1 point*

Score: 0

Accepted Answers:
b) The freezing point is lowered with increase in NaCl content

4) What is 'critical point' of a substance? ***1 point***

- a) Critical point corresponds to pressure temperature condition above which the substance is in an incompressible gaseous state
- b) Critical point corresponds to a pressure-temperature condition above which vapor and liquid have different densities
- c) Critical point is the end point of a phase equilibrium curve
- d) Critical point corresponds to a pressure-temperature condition above which vapor and liquid have identical densities

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Critical point corresponds to pressure temperature condition above which the substance is in an incompressible gaseous state
c) Critical point is the end point of a phase equilibrium curve
d) Critical point corresponds to a pressure-temperature condition above which vapor and liquid have identical densities

5) How can you increase the solubility of CO_2 in water? ***1 point***

- a) By increasing pressure
- b) By increasing temperature
- c) By increasing the concentration of an electrolyte
- d) By decreasing pressure

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) By increasing pressure

6) The value of R in $cm^3 bar/deg$ Kelvin? ***1 point***

- a) 83.02
- b) 83.12
- c) 84.12
- d) 80.32

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) 83.12

7) In a real gas, the pressure is ***1 point***

- a) Reduced compared to the ideal case
- b) Elevated compared to the ideal case
- c) Same as that in ideal case
- d) Dependent on the nature of gas molecule

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Reduced compared to the ideal case

8) In hydrothermal systems how the metals are dominantly transported in the fluid? ***1 point***

- a) As dissolved single ions of the metals
- b) As complex ions by combining with ligands
- c) As particulate matter
- d) As adsorbed on to surfaces of entrained minerals

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) As complex ions by combining with ligands

9) A mineral AB dissociates into cation A and anion B in water. Which one of the following is correct? ***1 point***

- a) The mineral AB will precipitate from a solution containing cation A and anion B if the product of the concentrations of A and B is more than or equal to the solubility product
- b) The mineral AB will precipitate from a solution containing cation A and anion B if the sum of the concentrations of A and B is equal to the solubility product
- c) The mineral AB will precipitate from a solution containing cation A and anion B if the product of the concentrations of A and B is less than the solubility product
- d) The mineral AB will precipitate if the solution containing cations of A and anions of B is cooled.

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) The mineral AB will precipitate from a solution containing cation A and anion B if the product of the concentrations of A and B is more than or equal to the solubility product

10) What happens if a fixed volume of water is frozen? ***1 point***

- a) The volume of the solid ice is less than the liquid water and the water molecules are more ordered
- b) The volume of the solid ice is more than the liquid water and the water molecules are more ordered
- c) The volume of the solid ice is same as that of the liquid waterand the water molecules are less ordered
- d) The volume of the solid ice is same as that of the liquid water and the water molecules are more ordered

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) The volume of the solid ice is more than the liquid water and the water molecules are more ordered

11) The mineral that usually will precipitate from a fluid of appropriate composition ***1 point***

- a) Quartz
- b) Orthopyroxene
- c) Garnet
- d) Olivine

No, the answer is incorrect.

Score: 0

Accepted Answers:
a) Quartz

12) Which of the fluid type most is the most likely to be involved in porphyry-type copper deposits **1 point**

- a) Magmatic
- b) Metamorphic
- c) Connate
- d) Juvenile

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Magmatic

13) Which of the fluid type is likely to have the highest temperature **1 point**

- a) Magmatic
- b) Meteoric
- c) Connate
- d) Juvenile

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Juvenile

14) What will happen if a mixture of CO_2 and water is kept at low temperature and a higher pressure **1 point**

- a) Nothing significant will happen
- b) Their mutual solubility will increase
- c) Their mutual solubility will decrease
- d) A hydrate of CO_2 will form

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) A hydrate of CO_2 will form

15) If water is kept in a sealed container (not fully filled) and the container is evacuated with the help of a vacuum pump to a pressure of about 0.01 atmosphere, what will happen to the water? **1 point**

- a) No change will be observed
- b) The water inside will become ice
- c) The water inside will boil
- d) The water inside will expand in volume

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) The water inside will boil

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