QUEBEC SCIENCE AND THE ENVIRONMENT, SECONDARY IV · UNIT A

Material World and the Environment — Practice Test

Quebec Science and the Environment, Secondary IV • 25 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A lake sample is made by dissolving 48 grams of nitrate in 2 litres of water. Its concentration, in grams per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A reaction produces 2 moles of product for every 1 mole of reactant used. From 3 moles of reactant, the moles of product formed are**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A soil extract contains 18 grams of solute in 300 grams of solution. Its concentration, in percent by mass, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A water sample contains 120 milligrams of contaminant in 4 kilograms of water. Its concentration, in parts per million, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A worker pushes a recycling bin with a force of 25 newtons for 6 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **A solution with a pH below 7 is**

A acidic

B neutral

C basic

D saturated

Understand It with Pulse | Flag a mistake

7 **A substance that dissolves in water and allows the solution to conduct electricity is an**

- A electrolyte
- B nonelectrolyte
- C insulator
- D catalyst

Understand It with Pulse | Flag a mistake

8 **Adding water to a solution without adding solute**

- A lowers its concentration
- B raises its concentration
- C keeps its concentration
- D changes the solute

Understand It with Pulse | Flag a mistake

9 **An atom or a group of atoms with an electric charge is an**

A neutral atom

B ion

C molecule

D isotope

Understand It with Pulse | Flag a mistake

10 **An endothermic reaction takes heat**

A to its surroundings

B from its surroundings

C from its products only

D to its reactants only

Understand It with Pulse | Flag a mistake

11 **An exothermic reaction releases heat**

A from its surroundings

B to its reactants only

C to its surroundings

D from its products only

Understand It with Pulse | Flag a mistake

12 **An ionic bond forms when electrons are**

A transferred between atoms

B shared equally

C destroyed

D created

Understand It with Pulse | Flag a mistake

13 **Balancing a chemical equation adjusts the**

A subscripts

B atomic numbers

C coefficients

D charges

Understand It with Pulse | Flag a mistake

14 **Heat is energy transferred because of a difference in**

A mass

B volume

C temperature

D pressure

Understand It with Pulse | Flag a mistake

15 **Use the specific heat capacity of water as 4.19 joules per gram per degree Celsius. A sample of 150 grams of water warms by 10 degrees Celsius. The heat absorbed, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A lake sample is made by dissolving 72 grams of nitrate in 3 litres of water. Its concentration, in grams per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A reaction produces 2 moles of product for every 1 mole of reactant used. From 5 moles of reactant, the moles of product formed are**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A soil extract contains 45 grams of solute in 300 grams of solution. Its concentration, in percent by mass, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **A water sample contains 210 milligrams of contaminant in 3 kilograms of water. Its concentration, in parts per million, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **A worker pushes a recycling bin with a force of 40 newtons for 3 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A lake sample is made by dissolving 35 grams of nitrate in 5 litres of water. Its concentration, in grams per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A reaction produces 2 moles of product for every 1 mole of reactant used. From 7 moles of reactant, the moles of product formed are**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A soil extract contains 28 grams of solute in 400 grams of solution. Its concentration, in percent by mass, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **A water sample contains 160 milligrams of contaminant in 8 kilograms of water. Its concentration, in parts per million, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **A worker pushes a recycling bin with a force of 18 newtons for 5 metres in the direction of the force. The work done, in joules, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 24
2. 6
3. 6
4. 30
5. 150
6. A
7. A
8. A
9. B
10. B
11. C
12. A
13. C
14. C
15. 6285
16. 24
17. 10
18. 15
19. 70
20. 120
21. 7
22. 14
23. 7
24. 20
25. 90

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