QUEBEC SCIENCE AND TECHNOLOGY, SECONDARY IV · UNIT B

Material World - Chemical Changes — Practice Test

Quebec Science and Technology, 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 solution contains 10 grams of solute in 200 grams of solution. Its concentration, in percent by mass, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A solution has hydrogen ion concentration $10^{-}3$ moles per litre . Its pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A solution is made by dissolving 40 grams of salt in 2 litres of water. Its concentration, in grams per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A solution with pH 3 is**

A acidic

B basic

C neutral

D salty

Understand It with Pulse | Flag a mistake

5 **A chemical change produces a new substance with different**

A mass only

B colour only

C properties

D volume only

Understand It with Pulse | Flag a mistake

6 **A concentrated solution has a large amount of solute per unit**

- A mass of container
- B volume
- C time
- D temperature

Understand It with Pulse | Flag a mistake

7 **A positively charged ion is called a**

- A cation
- B anion
- C neutron
- D isotope

Understand It with Pulse | Flag a mistake

8 **A sample of 50 grams of solution contains 5 grams of salt. The mass of water in the sample, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A solution is made by dissolving 30 grams of sugar in 6 litres of water. Its concentration, in grams per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **An acid base neutralization reaction produces a salt and**

A oxygen

B water

C hydrogen

D carbon dioxide

Understand It with Pulse | Flag a mistake

11 **An ion is an atom or group of atoms that has**

A no electrons

B no nucleus

C no mass

D an electric charge

Understand It with Pulse | Flag a mistake

12 **Balancing a chemical equation ensures the same number of each atom on both**

A molecules only

B charges only

C states only

D sides

Understand It with Pulse | Flag a mistake

13 **Cellular respiration releases energy from glucose using**

A oxygen

B carbon dioxide

C nitrogen

D helium

Understand It with Pulse | Flag a mistake

14 **Combustion is a chemical change in which a substance reacts with**

A nitrogen

B hydrogen

C oxygen

D argon

Understand It with Pulse | Flag a mistake

15 **Dissolving salt in water is a**

A chemical change

B nuclear change

C combustion

D physical change

Understand It with Pulse | Flag a mistake

16 **Electrical conductivity in a solution depends on the presence of free**

A sand grains

B ions

C gas bubbles

D oil drops

Understand It with Pulse | Flag a mistake

17 **Elements in the same group of the periodic table have similar**

A chemical properties

B atomic masses

C colours

D states

Understand It with Pulse | Flag a mistake

18 **Elements in the same period have the same number of electron**

A protons only

B shells

C neutrons only

D isotopes

Understand It with Pulse | Flag a mistake

19 **A solution contains 15 grams of solute in 300 grams of solution. Its concentration, in percent by mass, is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **A solution has hydrogen ion concentration $10^{-}5$ moles per litre . Its pH is**

ANSWER

Understand It with Pulse | Flag a mistake

21 **A solution is made by dissolving 60 grams of salt in 3 litres of water. Its concentration, in grams per litre, is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **A solution with pH 11 is**

A acidic

B basic

C neutral

D pure water

Understand It with Pulse | Flag a mistake

23 **A solution contains 20 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 solution has hydrogen ion concentration $10^{-}9$ moles per litre . Its pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **A solution is made by dissolving 25 grams of salt in 5 litres of water. Its concentration, in grams per litre, is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	5	**10.**	B	**19.**	5
2.	3	**11.**	D	**20.**	5
3.	20	**12.**	D	**21.**	20
4.	A	**13.**	A	**22.**	B
5.	C	**14.**	C	**23.**	5
6.	B	**15.**	D	**24.**	9
7.	A	**16.**	B	**25.**	5
8.	45	**17.**	A		
9.	5	**18.**	B		

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