MANITOBA CHEMISTRY 30S · UNIT A · 25 QUESTIONS

Physical Properties of Matter — Practice Test

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 sample of carbon dioxide has amount 3 moles and molar mass 44 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A sample of methane has mass 96 grams. Its molar mass is 16 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **An amount of 5 moles of nitrogen has molar mass 28 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A solution has 4 moles of solute in 2 litres. Its concentration, in moles per litre, is**

ANSWER

Understand It with Pulse | Flag a mistake

5 **A solution has hydrogen ion concentration $10^{-}7$ moles per litre . Its pH is**

ANSWER

Understand It with Pulse | Flag a mistake

6 **The number of atoms in one molecule of O_2 is**

ANSWER

Understand It with Pulse | Flag a mistake

7 **A sample of oxygen has amount 6 moles and molar mass 32 grams per mole. Its mass, in grams, is**

ANSWER

Understand It with Pulse | Flag a mistake

8 **A sample of nitrogen has mass 56 grams. Its molar mass is 28 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **An amount of 5 moles of hydrogen has molar mass 2 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A solution has 2 moles of solute in 1 litres. Its concentration, in moles per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A sample of water has amount 4 moles and molar mass 18 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A sample of methane has amount 6 moles and molar mass 16 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **A sample of hydrogen has mass 6 grams. Its molar mass is 2 grams per mole. The amount, in moles, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **An amount of 5 moles of ammonia has molar mass 17 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **The powerhouse of the cell, where energy is released, is the**

- A mitochondrion
- B nucleus
- C ribosome
- D vacuole

Understand It with Pulse | Flag a mistake

17 **The control centre of the cell, holding genetic material, is the**

- A mitochondrion
- B nucleus
- C chloroplast
- D membrane

Understand It with Pulse | Flag a mistake

18 **The organelle where photosynthesis happens in plant cells is the**

A mitochondrion

B nucleus

C chloroplast

D vacuole

Understand It with Pulse | Flag a mistake

19 **The basic unit of life is the**

A organ

B tissue

C organism

D cell

Understand It with Pulse | Flag a mistake

20 **The process by which plants make food using sunlight is**

- A photosynthesis
- B respiration
- C fermentation
- D digestion

Understand It with Pulse | Flag a mistake

21 **The process that releases energy from food in cells is**

- A photosynthesis
- B cellular respiration
- C osmosis
- D diffusion

Understand It with Pulse | Flag a mistake

22 **The molecule that carries genetic instructions is**

A RNA only

B protein only

C DNA

D glucose

Understand It with Pulse | Flag a mistake

23 **A change in the genetic material of an organism is a**

A adaptation

B variation

C selection

D mutation

Understand It with Pulse | Flag a mistake

24 **The passing of traits from parents to offspring is**

A heredity

B evolution

C homeostasis

D metabolism

Understand It with Pulse | Flag a mistake

25 **The maintenance of a stable internal environment is**

A photosynthesis

B homeostasis

C fermentation

D osmosis

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	132	**10.**	2	**19.**	D
2.	6	**11.**	5	**20.**	A
3.	140	**12.**	72	**21.**	B
4.	2	**13.**	96	**22.**	C
5.	7	**14.**	3	**23.**	D
6.	2	**15.**	85	**24.**	A
7.	192	**16.**	A	**25.**	B
8.	2	**17.**	B		
9.	10	**18.**	C		

© 2026 Brett Robbins. All Rights Reserved.