MANITOBA CHEMISTRY 40S · UNIT B · 25 QUESTIONS

Reaction Rates and Kinetics — 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 solution has 6 moles of solute in 3 litres. Its concentration, in moles per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A sample of carbon dioxide has amount 6 moles and molar mass 44 grams per mole. Its mass, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **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

6 **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

7 **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

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

ANSWER

Understand It with Pulse | Flag a mistake

9 **A sample of ammonia has amount 3 moles and molar mass 17 grams per mole. Its mass, in grams, is**

ANSWER

Understand It with Pulse | Flag a mistake

10 **A sample of oxygen has amount 5 moles and molar mass 32 grams per mole. Its mass, in grams, is**

ANSWER

Understand It with Pulse | Flag a mistake

11 **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

12 **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

13 **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

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

ANSWER

Understand It with Pulse | Flag a mistake

15 **A sample of water has amount 3 moles and molar mass 18 grams per mole. Its mass, in grams, is**

ANSWER

Understand It with Pulse | Flag a mistake

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

A organ

B cell

C tissue

D organism

Understand It with Pulse | Flag a mistake

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

A respiration

B fermentation

C photosynthesis

D digestion

Understand It with Pulse | Flag a mistake

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

A photosynthesis

B osmosis

C diffusion

D cellular respiration

Understand It with Pulse | Flag a mistake

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

A DNA

B RNA only

C protein only

D glucose

Understand It with Pulse | Flag a mistake

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

A adaptation

B mutation

C variation

D selection

Understand It with Pulse | Flag a mistake

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

A evolution

B homeostasis

C heredity

D metabolism

Understand It with Pulse | Flag a mistake

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

A photosynthesis

B fermentation

C osmosis

D homeostasis

Understand It with Pulse | Flag a mistake

23 **The movement of water across a partially permeable membrane is**

A osmosis

B diffusion

C active transport

D photosynthesis

Understand It with Pulse | Flag a mistake

24 **The organ that pumps blood around the body is the**

A liver

B heart

C lung

D kidney

Understand It with Pulse | Flag a mistake

25 **The organ where oxygen enters the blood is the**

A heart

B liver

C lung

D stomach

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	2	**10.**	160	**19.**	A
2.	5	**11.**	2	**20.**	B
3.	2	**12.**	10	**21.**	C
4.	264	**13.**	2	**22.**	D
5.	6	**14.**	9	**23.**	A
6.	140	**15.**	54	**24.**	B
7.	2	**16.**	B	**25.**	C
8.	3	**17.**	C		
9.	51	**18.**	D		

© 2026 Brett Robbins. All Rights Reserved.