CHEM40 · MANITOBA

CHEM40
Practice Test

Unit F: Oxidation-Reduction Reactions and Electrochemistry

25 Questions

Original practice test based on the Manitoba curriculum. Work through each question, then check your answers at the end.

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.

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Question 1

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

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Question 2

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

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Question 3

The number of atoms in one molecule of O_2 is

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Question 4

A sample of carbon dioxide has amount 5 moles and molar mass 44 grams per mole. Its mass, in grams, is

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Question 5

A sample of methane has mass 64 grams. Its molar mass is 16 grams per mole. The amount, in moles, is

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Question 6

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

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Question 7

A solution has 5 moles of solute in 1 litres. Its concentration, in moles per litre, is

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Question 8

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

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Question 9

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

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Question 10

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

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Question 11

A sample of nitrogen has mass 140 grams. Its molar mass is 28 grams per mole. The amount, in moles, is

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Question 12

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

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Question 13

A solution has 3 moles of solute in 3 litres. Its concentration, in moles per litre, is

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Question 14

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

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Question 15

A sample of water has amount 6 moles and molar mass 18 grams per mole. Its mass, in grams, is

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Question 16

The gas plants absorb from the air for photosynthesis is

A) oxygen

B) carbon dioxide

C) nitrogen

D) hydrogen

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Question 17

The gas released by plants during photosynthesis is

A) carbon dioxide

B) nitrogen

C) oxygen

D) hydrogen

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Question 18

An acid has a pH that is

A) equal to 7

B) greater than 7

C) equal to 14

D) less than 7

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Question 19

A neutral solution has a pH of

A) 7

B) 0

C) 14

D) 1

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Question 20

The force that pulls objects toward Earth is

A) friction

B) gravity

C) magnetism

D) inertia

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Question 21

The unit of force is the

A) joule

B) watt

C) newton

D) pascal

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Question 22

The unit of energy is the

A) newton

B) watt

C) volt

D) joule

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Question 23

The unit of power is the

A) watt

B) joule

C) newton

D) ampere

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Question 24

The unit of electric current is the

A) volt

B) ampere

C) ohm

D) watt

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Question 25

The unit of voltage is the

A) ampere

B) ohm

C) volt

D) watt

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ANSWER KEY

1.	1	**10.**	160	**18.**	D
2.	3	**11.**	5	**19.**	A
3.	2	**12.**	4	**20.**	B
4.	220	**13.**	1	**21.**	C
5.	4	**14.**	7	**22.**	D
6.	84	**15.**	108	**23.**	A
7.	5	**16.**	B	**24.**	B
8.	9	**17.**	C	**25.**	C
9.	51				

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