Final Exam — Practice Test

Newfoundland and Labrador Chemistry 3202 • 50 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 **Increasing reactant concentration increases rate mainly because collisions occur**

- A less often
- B with less energy
- C more often
- D in a different vessel

Understand It with Pulse | Flag a mistake

2 **A base is a substance that accepts**

A sodium ions

B hydrogen ions

C electrons only

D chloride ions

Understand It with Pulse | Flag a mistake

3 **An endothermic reaction absorbs energy from the**

A products only

B surroundings

C catalyst

D container only

Understand It with Pulse | Flag a mistake

4 **An oxidation number changes from 0 to plus 2. The number of electrons lost is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **Activation energy is the minimum energy needed for reactants to form the**

A products at once

B catalyst

C activated complex

D equilibrium mixture

Understand It with Pulse | Flag a mistake

6 **The pH scale measures the concentration of**

A hydrogen ions

B hydroxide ions

C sodium ions

D electrons

Understand It with Pulse | Flag a mistake

7 **Breaking chemical bonds is an**

A exothermic process

B endothermic process

C spontaneous process only

D neutral process

Understand It with Pulse | Flag a mistake

8 **A half reaction shows either oxidation or reduction with electrons written as a**

A catalyst only

B salt only

C gas only

D reactant or product

Understand It with Pulse | Flag a mistake

9 **Increasing the surface area of a solid reactant increases rate because more particles are**

A exposed to collisions

B dissolved completely

C heated evenly

D converted to gas

Understand It with Pulse | Flag a mistake

10 **A solution with pH 11 is best described as**

- A basic
- B acidic
- C neutral
- D pure water

Understand It with Pulse | Flag a mistake

11 **A reaction with a negative Gibbs free energy change is**

- A spontaneous
- B nonspontaneous
- C at equilibrium only
- D endothermic only

Understand It with Pulse | Flag a mistake

12 **A positive standard cell potential indicates a cell reaction that is**

A nonspontaneous

B at equilibrium only

C endothermic only

D spontaneous

Understand It with Pulse | Flag a mistake

13 **For an exothermic reaction, increasing temperature shifts equilibrium toward the**

A products

B catalyst

C reactants

D solids only

Understand It with Pulse | Flag a mistake

14 **A buffer solution resists changes in pH when small amounts of acid or base are**

A removed by filtration

B frozen

C added

D diluted greatly

Understand It with Pulse | Flag a mistake

15 **Combustion of a fuel in oxygen is an example of an**

A endothermic reaction

B neutralization only

C precipitation only

D exothermic reaction

Understand It with Pulse | Flag a mistake

16 **A stronger reducing agent is more likely to**

A lose electrons

B gain electrons

C form a salt

D release gas

Understand It with Pulse | Flag a mistake

17 **An equilibrium constant much greater than 1 indicates that at equilibrium, products are**

A absent

B favoured

C equal to reactants

D unstable

Understand It with Pulse | Flag a mistake

18 **The ion product of water at 25 degrees is 1.0 times 10^{-14}. This means pH plus pOH equals**

- A 7
- B 14
- C 10
- D 1

Understand It with Pulse | Flag a mistake

19 **Water mass 200 grams, specific heat capacity 4.19 joules per gram degree, temperature rise 5 degrees. The heat in joules is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **Electrolysis of molten sodium chloride produces sodium metal and**

- A chlorine gas
- B oxygen gas
- C hydrogen gas
- D water

Understand It with Pulse | Flag a mistake

21 **A product concentration rises by 0.9 moles per litre in 45 seconds. The average rate in moles per litre per second is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **Hydrogen ion concentration is 0.0001 moles per litre. The pH value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **A reaction absorbs 12000 joules for 2 moles. The molar enthalpy magnitude in joules per mole is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **Galvanizing protects iron by coating it with**

A copper

B lead

C tin only

D zinc

Understand It with Pulse | Flag a mistake

25 **A reactant starts at 2.0 moles per litre and falls to 0.5 moles per litre. The change in moles per litre is**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **A solution has pH 5. Its pOH value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **A calorimeter absorbs 2500 joules and water absorbs 1500 joules. The total heat in joules is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **A current of 3 amperes flows for 200 seconds. The charge in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **A rate is 0.05 moles per litre per second. The time in seconds to produce 1.5 moles per litre is**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **An acid sample contains 0.030 moles. It is neutralized by 0.30 moles per litre base. The volume of base in litres is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **The first law of thermodynamics states that energy cannot be created or destroyed, only**

A transferred or transformed

B released as heat only

C stored as mass

D measured in moles

Understand It with Pulse | Flag a mistake

32 **A current of 4 amperes flows for 250 seconds. The charge in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **Enzymes are biological catalysts made of**

A starch

B protein

C lipid only

D DNA only

Understand It with Pulse | Flag a mistake

34 **Acetic acid is an example of a**

A strong acid

B weak acid

C strong base

D salt only

Understand It with Pulse | Flag a mistake

35 **An enthalpy diagram for an exothermic reaction shows products at a lower energy than**

A catalyst

B surroundings

C container

D reactants

Understand It with Pulse | Flag a mistake

36 **In the electrolysis of water, hydrogen gas forms at the**

A anode

B cathode

C salt bridge

D battery only

Understand It with Pulse | Flag a mistake

37 **Le Chatelier principle states that a system at equilibrium responds to a stress by shifting to**

A counteract the stress

B increase the stress

C stop reacting

D form a catalyst

Understand It with Pulse | Flag a mistake

38 **Diluting an acidic solution with water moves its pH toward**

A 7

B 0

C 14

D 1

Understand It with Pulse | Flag a mistake

39 **The enthalpy change of combustion is measured when one mole of a substance burns**

- A partly in air
- B without oxygen
- C completely in oxygen
- D in water

Understand It with Pulse | Flag a mistake

40 **In the electrolysis of water, oxygen gas forms at the**

- A cathode
- B salt bridge
- C anode
- D battery only

Understand It with Pulse | Flag a mistake

41 **Adding a catalyst to a system at equilibrium changes the rate at which equilibrium is reached but not the**

A forward rate

B reverse rate

C temperature

D equilibrium position

Understand It with Pulse | Flag a mistake

42 **Blood is kept near pH 7.4 mainly by**

A strong acids

B filtration only

C dilution only

D buffer systems

Understand It with Pulse | Flag a mistake

43 **A reaction releases 9000 joules for 3 moles. The molar enthalpy magnitude in joules per mole is**

ANSWER

Understand It with Pulse | Flag a mistake

44 **Standard cell potential is calculated as cathode potential minus**

A salt bridge potential

B wire potential

C anode potential

D solution potential

Understand It with Pulse | Flag a mistake

45 **Equilibrium product is 0.9 and reactant is 0.3 moles per litre. The ratio is**

ANSWER

Understand It with Pulse | Flag a mistake

46 **A solution has pH 10. Its pOH value is**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **Temperature rises from 18 degrees to 28 degrees. The change in degrees is**

ANSWER _____

Understand It with Pulse | Flag a mistake

48 **The salt bridge in a galvanic cell mainly maintains**

A electrical neutrality

B temperature

C pressure

D concentration of acid

Understand It with Pulse | Flag a mistake

49 **A reaction produces 0.03 moles per litre per second for 100 seconds. The concentration produced is**

ANSWER

Understand It with Pulse | Flag a mistake

50 **An acid sample contains 0.040 moles and base concentration is 0.40 moles per litre. The volume of base in litres is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**18.**	B	**35.**	D
2.	B	**19.**	4190.000000000001	**36.**	B
3.	B	**20.**	A	**37.**	A
4.	2	**21.**	0.02	**38.**	A
5.	C	**22.**	4	**39.**	C
6.	A	**23.**	6000	**40.**	C
7.	B	**24.**	D	**41.**	D
8.	D	**25.**	1.5	**42.**	D
9.	A	**26.**	9	**43.**	3000
10.	A	**27.**	4000	**44.**	C
11.	A	**28.**	600	**45.**	3
12.	D	**29.**	30	**46.**	4
13.	C	**30.**	0.1	**47.**	10
14.	C	**31.**	A	**48.**	A
15.	D	**32.**	1000	**49.**	3
16.	A	**33.**	B	**50.**	0.09999999999999999
17.	B	**34.**	B		

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