PRINCE EDWARD ISLAND CHEMISTRY 12 · FINAL EXAM

Final Exam — Practice Test

Prince Edward Island Chemistry 12 • 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 **Heating 200 grams of water by 5 degrees Celsius with a specific heat capacity of 4 joules per gram per degree Celsius absorbs this many joules**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A solution contains 3 moles of solute in 6 litres. Its molar concentration in moles per litre is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **A solution has pOH 3. Its pH at 25 degrees Celsius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A galvanic cell has cathode potential 0.8 volts and anode potential -0.44 volts. The cell potential in volts is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A reaction absorbs 250 kilojoules. The enthalpy change in kilojoules, with sign, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **Diluting 50 millilitres of 4 molar solution to 2 molar gives a final volume in millilitres of**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **A solution with pH 7 at 25 degrees Celsius is**

A basic

B concentrated

C neutral

D acidic

Understand It with Pulse | Flag a mistake

8 **The salt bridge in a galvanic cell**

A is the cathode

B measures voltage

C maintains charge balance

D provides electrons

Understand It with Pulse | Flag a mistake

9 **An exothermic reaction has an enthalpy change that is**

A negative

B positive

C zero

D undefined

Understand It with Pulse | Flag a mistake

10 **Increasing temperature usually increases reaction rate because particles**

A collide more often and with more energy

B collide less often

C become larger

D lose energy

Understand It with Pulse | Flag a mistake

11 **A strong acid**

- A ionizes completely in water
- B ionizes partly in water
- C never ionizes
- D forms a buffer only

Understand It with Pulse | Flag a mistake

12 **In electrolysis, the anode is the electrode where**

- A reduction occurs
- B electrons are produced by reduction
- C no reaction occurs
- D oxidation occurs

Understand It with Pulse | Flag a mistake

13 **The standard enthalpy of formation of an element in its standard state is**

A 100

B 0

C 1

D -1

Understand It with Pulse | Flag a mistake

14 **At equilibrium, the rates of forward and reverse reactions are**

A unrelated

B equal

C zero

D maximal

Understand It with Pulse | Flag a mistake

15 **An Arrhenius acid produces in water**

A hydroxide ions

B salt only

C electrons

D hydrogen ions

Understand It with Pulse | Flag a mistake

16 **Corrosion of iron is an example of**

A electrochemical oxidation

B neutralization

C precipitation

D combustion only

Understand It with Pulse | Flag a mistake

17 **Forming bonds releases energy, so bond forming is**

A neutral

B impossible

C exothermic

D endothermic

Understand It with Pulse | Flag a mistake

18 **Increasing pressure on a gaseous equilibrium favours the side with**

A more liquid

B higher temperature

C fewer gas moles

D more gas moles

Understand It with Pulse | Flag a mistake

19 **Neutralization of an acid by a base produces**

A hydrogen gas always

B a salt and water

C an acid only

D a base only

Understand It with Pulse | Flag a mistake

20 **A galvanic cell produces 2 volts and a current of 3 amperes. The power in watts is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **Heating 250 grams of water by 8 degrees Celsius with a specific heat capacity of 4 joules per gram per degree Celsius absorbs this many joules**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **Dilution is performed by adding**

A solute

B a catalyst

C an acid

D solvent

Understand It with Pulse | Flag a mistake

23 **A strong acid solution has hydrogen ion concentration 0.001 moles per litre. Its pH is**

ANSWER _____

Understand It with Pulse | Flag a mistake

24 **Iron in iron 3 plus ion has oxidation number**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **Heating 400 grams of water by 5 degrees Celsius with a specific heat capacity of 4 joules per gram per degree Celsius absorbs this many joules**

ANSWER _____

Understand It with Pulse | Flag a mistake

26 **A solution contains 5 moles in 10 litres. Its molar concentration in moles per litre as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

27 **A solution has pH 4. Its pOH at 25 degrees Celsius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

28 **An electrolytic cell runs at 5 amperes for 20 seconds. The charge in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **A sample absorbs 5000 joules and its temperature rises by 25 degrees Celsius. Its heat capacity in joules per degree Celsius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

30 **A reaction rate triples when concentration triples. The order with respect to that reactant is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **A solution has pOH 11. Its pH at 25 degrees Celsius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **A galvanic cell has cathode potential 0.34 volts and anode potential -0.25 volts. The cell potential in volts is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **Heating 300 grams of water by 10 degrees Celsius with a specific heat capacity of 4 joules per gram per degree Celsius absorbs this many joules**

ANSWER _____

Understand It with Pulse | Flag a mistake

34 **A solution contains 2 moles of solute in 5 litres. Its molar concentration in moles per litre is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **A solution has pOH 8. Its pH at 25 degrees Celsius is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36

A battery stores energy as

A nuclear energy

B thermal energy only

C chemical energy

D kinetic energy

Understand It with Pulse | Flag a mistake

37

Entropy increases when a system becomes

A more disordered

B more ordered

C colder

D smaller

Understand It with Pulse | Flag a mistake

38 **Le Chatelier principle predicts a system at equilibrium will shift to**

A increase the disturbance

B stop reacting

C form a catalyst

D counteract a disturbance

Understand It with Pulse | Flag a mistake

39 **Neutralizing 0.03 moles of acid with 0.1 molar base requires this many litres of base**

ANSWER _____

Understand It with Pulse | Flag a mistake

40 **An electrolytic cell runs at 3 amperes for 50 seconds. The charge in coulombs is**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **The specific heat capacity is heat per unit mass per**

A litre

B degree of temperature change

C mole only

D second

Understand It with Pulse | Flag a mistake

42 **An intermediate is formed and then**

A consumed during a reaction

B left as a product

C added as a catalyst

D never formed

Understand It with Pulse | Flag a mistake

43 **The conjugate base of an acid is formed by**

- A losing an electron
- B gaining water
- C losing a proton
- D gaining a proton

Understand It with Pulse | Flag a mistake

44 **A cell potential of 0.5 volts for a reaction with 1 electron transferred gives a charge per mole of reaction in coulombs, using 96500 coulombs per mole, of**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **Combustion of 4 moles of a fuel releases 500 kilojoules per mole. The total heat released in kilojoules is**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **Diluting 25 millilitres of 8 molar solution to 2 molar gives a final volume in millilitres of**

ANSWER

Understand It with Pulse | Flag a mistake

47 **A solution has pOH 9. Its pH at 25 degrees Celsius is**

ANSWER

Understand It with Pulse | Flag a mistake

48 **Zinc in zinc 2 plus ion has oxidation number**

ANSWER

Understand It with Pulse | Flag a mistake

49 **Step enthalpies of -200 and -100 kilojoules sum to this many kilojoules**

ANSWER

Understand It with Pulse | Flag a mistake

50 **Diluting 150 millilitres of 2 molar solution to 1 molar gives a final volume in millilitres of**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	4000	**18.**	C	**35.**	6
2.	0.5	**19.**	B	**36.**	C
3.	11	**20.**	6	**37.**	A
4.	1.24	**21.**	8000	**38.**	D
5.	250	**22.**	D	**39.**	0.3
6.	100	**23.**	3	**40.**	150
7.	C	**24.**	3	**41.**	B
8.	C	**25.**	8000	**42.**	A
9.	A	**26.**	0.5	**43.**	C
10.	A	**27.**	10	**44.**	96500
11.	A	**28.**	100	**45.**	2000
12.	D	**29.**	200	**46.**	100
13.	B	**30.**	1	**47.**	5
14.	B	**31.**	3	**48.**	2
15.	D	**32.**	0.59	**49.**	-300
16.	A	**33.**	12000	**50.**	300
17.	C	**34.**	0.4		

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