PRINCE EDWARD ISLAND CHEMISTRY 12 · UNIT B

Solutions, Kinetics and Equilibrium — Practice Test

Prince Edward Island Chemistry 12 • 25 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 **A solution contains 2 moles of solute in 4 litres. Its molar concentration in moles per litre is**

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 contains 1 moles of solute in 2 litres. Its molar concentration in moles per litre is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **Diluting 100 millilitres of 2 molar solution to 1 molar gives a final volume in millilitres of**

ANSWER

Understand It with Pulse | Flag a mistake

5 **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

6 **A reaction rate doubles when concentration doubles. The order with respect to that reactant is**

ANSWER

Understand It with Pulse | Flag a mistake

7 **A reaction rate quadruples when concentration doubles. The order with respect to that reactant is**

ANSWER

Understand It with Pulse | Flag a mistake

8 **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

9 **A catalyst increases reaction rate by**

A raising activation energy

B increasing reactant concentration

C changing equilibrium yield only

D lowering activation energy

Understand It with Pulse | Flag a mistake

10 **Increasing surface area increases rate because**

A activation energy rises

B temperature falls

C more particles are exposed to collision

D particles move slower

Understand It with Pulse | Flag a mistake

11 **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

12 **At equilibrium, concentrations are**

- A constant but not necessarily equal
- B equal always
- C zero
- D changing rapidly

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13 **Adding reactant to a system at equilibrium shifts it toward**

- A reactants
- B no change
- C a catalyst
- D products

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14 **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

15 **A large equilibrium constant means the equilibrium lies toward**

- A neither side
- B products
- C reactants
- D the catalyst

Understand It with Pulse | Flag a mistake

16 **A solution with a higher solute concentration than another of the same solute is**

- A more concentrated
- B more dilute
- C saturated always
- D supersaturated always

Understand It with Pulse | Flag a mistake

17 **Dilution is performed by adding**

- A solute
- B a catalyst
- C an acid
- D solvent

Understand It with Pulse | Flag a mistake

18 **A solution contains 0.5 moles in 2 litres. Its molar concentration in moles per litre as a decimal is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **To make 2 litres of 0.5 molar solution, the moles of solute needed are**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **A 100 millilitre sample of 3 molar solution contains this many millimoles, using moles times 1000, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **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

22 **Diluting 100 millilitres of 6 molar solution to 3 molar gives a final volume in millilitres of**

ANSWER

Understand It with Pulse | Flag a mistake

23 **To make 3 litres of 4 molar solution, the moles of solute needed are**

ANSWER

Understand It with Pulse | Flag a mistake

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

ANSWER

Understand It with Pulse | Flag a mistake

25 **A solution contains 8 moles in 4 litres. Its molar concentration in moles per litre is**

ANSWER

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. 0.5
2. 0.5
3. 0.5
4. 200
5. 100
6. 1
7. 2
8. A
9. D
10. C
11. B
12. A
13. D
14. C
15. B
16. A
17. D
18. 0.25
19. 1
20. 300
21. 0.5
22. 200
23. 12
24. 1
25. 2

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