ENGLAND GCSE CHEMISTRY OCR TWENTY FIRST CENTURY FOUNDATION · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 sunflower turns its head to follow the Sun. What is this a response to?**

A gravity

B touch

C water

D light

Understand It with Pulse | Flag a mistake

2 **Glass marbles in a tray are used as a model for particles in a solid. What do the marbles show?**

- **A** particles are far apart from each other
- **B** particles move freely through space
- **C** particles flow past each other easily
- **D** particles vibrate in fixed positions

Understand It with Pulse | Flag a mistake

3 **What is the general formula for alkenes?**

- **A** C_nH_n
- **B** C_nH_{2n+2}
- **C** C_nH_{2n-2}
- **D** C_nH_{2n}

Understand It with Pulse | Flag a mistake

4 **Paintbrushes are cleaned in water. Why does the paint wash off?**

A the paint burns in the water

B the paint freezes in the water

C the paint dissolves

D the paint melts in the water

Understand It with Pulse | Flag a mistake

5 **A river flows to the sea. What is this part of?**

A the rock cycle

B the nitrogen cycle

C the water cycle

D the carbon cycle

Understand It with Pulse | Flag a mistake

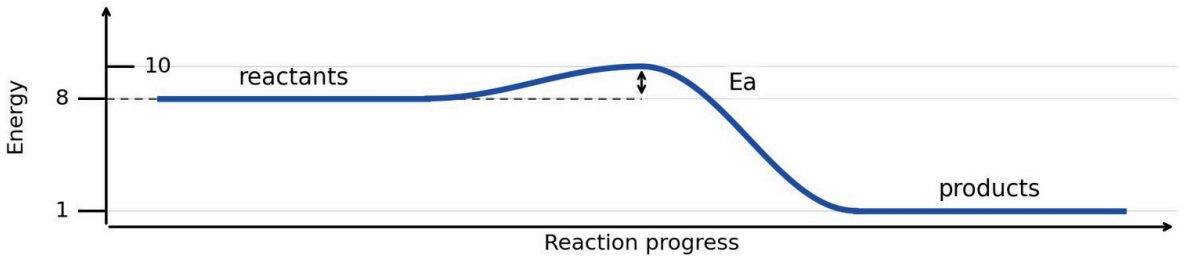
6

A school lunch tray holds a meal. Why do we need food?

- A to feel full after eating
- B for energy and growth
- C for fun only, not for health
- D to stay awake at night

Understand It with Pulse | Flag a mistake

7 **The diagram shows the energy profile for a reaction. The reactants are at energy 8 and the products are at 1. Is the reaction exothermic or endothermic?**



A endothermic, energy is given out

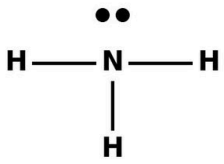
B endothermic, energy is taken in

C exothermic, energy is taken in

D exothermic, energy is given out

Understand It with Pulse | Flag a mistake

8 **The diagram shows an ammonia molecule. How many covalent bonds does the nitrogen atom form?**



- **A** 3
- **B** 1
- **C** 2
- **D** 4

Understand It with Pulse | Flag a mistake

9 **What is made when ethene reacts with steam?**

- **A** ethanol
- **B** carbon dioxide and water
- **C** ethane, a saturated gas
- **D** ethanoic acid, a weak acid

Understand It with Pulse | Flag a mistake

10 **What is the main metal in steel?**

A iron

B chromium

C nickel

D carbon

Understand It with Pulse | Flag a mistake

11 **What colour flame does potassium give in a flame test?**

A lilac

B green

C brick red

D yellow

Understand It with Pulse | Flag a mistake

12 **A solution has a concentration of 2 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

- A 8 mol
- B 3 mol
- C 5 mol
- D 4 mol

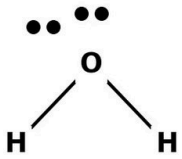
Understand It with Pulse | Flag a mistake

13 **Which human activity releases methane?**

- A planting trees
- B farming cattle
- C burning coal
- D driving electric cars

Understand It with Pulse | Flag a mistake

14 **The diagram shows a water molecule. How many lone pairs of electrons does the oxygen atom have?**



- **A** 3
- **B** 4
- **C** 1
- **D** 2

Understand It with Pulse | Flag a mistake

15 **What is poly(ethene) made from?**

- **A** ethene
- **B** methane
- **C** ethane
- **D** propene

Understand It with Pulse | Flag a mistake

16 **What is galvanising?**

A coating iron with zinc

B coating iron with paint

C coating iron with plastic

D coating iron with copper

Understand It with Pulse | Flag a mistake

17 **How do you test for carbon dioxide gas?**

A it relights a glowing splint

B it burns with a pop

C it turns limewater cloudy

D it turns litmus blue

Understand It with Pulse | Flag a mistake

18 **What is the relative formula mass of calcium oxide, CaO?**

A 52

B 112

C 56

D 64

Understand It with Pulse | Flag a mistake

19 **A sunflower grows taller over the summer. Where does most of the extra mass come from?**

A sunlight captured by the leaves

B carbon dioxide from the air

C water absorbed from the soil

D minerals absorbed from the soil

Understand It with Pulse | Flag a mistake

20 **What is the relative atomic mass of an element?**

- A the average mass of its atoms
- B the mass of its heaviest isotope
- C the total mass of all its isotopes
- D the number of protons in its atoms

Understand It with Pulse | Flag a mistake

21 **What is ethanol used for?**

- A as a fertiliser for crops
- B as a food preservative only
- C as a bleach for cleaning
- D as a fuel and a solvent

Understand It with Pulse | Flag a mistake

22 **An alloy is 75 percent copper. How much copper is in 200 kg of the alloy?**

A 175 kg

B 300 kg

C 150 kg

D 125 kg

Understand It with Pulse | Flag a mistake

23 **Why are instrumental methods better than chemical tests?**

A they need no sample at all

B they work on solids only

C they are fast, sensitive and accurate

D they are cheap and need no training at all

Understand It with Pulse | Flag a mistake

24 **A reaction makes 30 g of useful product from 50 g of reactants in total. What is the atom economy?**

- A 30%
- B 60%
- C 120%
- D 180%

Understand It with Pulse | Flag a mistake

25 **What happens to the temperature during an exothermic reaction?**

- A it rises
- B it falls
- C it stays the same
- D it falls then rises

Understand It with Pulse | Flag a mistake

26 **Which transition metal is used in construction?**

A lithium

B iron

C sodium

D calcium

Understand It with Pulse | Flag a mistake

27 **What forms at the cathode during the electrolysis of copper sulfate solution?**

A hydrogen

B bromine

C lead

D copper

Understand It with Pulse | Flag a mistake

28 **In which state are the particles closest together?**

A gas

B plasma

C solid

D liquid

Understand It with Pulse | Flag a mistake

29 **What is the end point of a titration?**

A the flask breaks

B the solution freezes

C the colour changes

D the acid boils

Understand It with Pulse | Flag a mistake

30 **What is the mass of 5 moles of a substance with a relative formula mass of 20?**

A 200 g

B 110 g

C 100 g

D 50 g

Understand It with Pulse | Flag a mistake

31 **What damages the ozone layer?**

A nitrogen

B CFCs

C oxygen

D carbon dioxide

Understand It with Pulse | Flag a mistake

32 **Hardcover books are stacked on a table. What force pulls them down?**

A tension

B gravity

C air resistance

D friction

Understand It with Pulse | Flag a mistake

33 **What is an addition reaction?**

A a reaction where a gas is given off

B a reaction where molecules join together

C a reaction where a molecule splits apart into pieces

D a reaction where water is removed

Understand It with Pulse | Flag a mistake

34 **In chromatography, what is the stationary phase?**

A the solvent

B the spots

C the paper

D the ruler

Understand It with Pulse | Flag a mistake

35 **A castle wall is made of stone. What type of rock is limestone?**

A igneous

B volcanic

C metamorphic

D sedimentary

Understand It with Pulse | Flag a mistake

36 **A reaction should make 200 g of product but only makes 180 g. What is the percentage yield?**

A 90%

B 100%

C 80%

D 180%

Understand It with Pulse | Flag a mistake

37 **How do greenhouse gases warm the Earth?**

A they trap oxygen in the air

B they absorb infrared radiation

C they reflect sunlight back down

D they stop the Sun from shining

Understand It with Pulse | Flag a mistake

38 **An element is in Group 2. How many electrons are in its outer shell?**

A 1

B 2

C 8

D 7

Understand It with Pulse | Flag a mistake

39 **Silver coins are made of the element silver. What is the chemical symbol for silver?**

A Ag

B Si

C S

D Sv

Understand It with Pulse | Flag a mistake

40 **What does adding carbon to iron do?**

A it makes it melt more easily

B it makes it conduct less heat

C it makes it softer and weaker

D it makes it harder

Understand It with Pulse | Flag a mistake

41 **How do you test for hydrogen gas?**

A it turns limewater cloudy

B it turns damp litmus red

C it burns with a squeaky pop

D it relights a glowing splint

Understand It with Pulse | Flag a mistake

42 **Why does increasing the pressure of a gas increase the rate?**

A particles are closer together

B particles get smaller

C particles move more slowly in the gas

D the temperature falls

Understand It with Pulse | Flag a mistake

43 **What is the first step in treating water?**

A filtration

B adding fluoride

C chlorination

D boiling

Understand It with Pulse | Flag a mistake

44 **An element, chlorine, has isotopes. 75 percent have a mass of 35 and 25 percent have a mass of 37. What is the relative atomic mass of chlorine?**

A 36.5

B 36

C 34.5

D 35.5

Understand It with Pulse | Flag a mistake

45 **What conditions are used to make ethanol from ethene?**

A hydrogen and a cold catalyst

B cold water and no catalyst

C oxygen and a very high pressure

D steam and a catalyst

Understand It with Pulse | Flag a mistake

46 **What type of bonding is in copper?**

A metallic

B intermolecular forces

C covalent

D ionic

Understand It with Pulse | Flag a mistake

47 **Why is an indicator used in a titration?**

A to colour the acid

B to cool the mixture

C to show the end

D to heat the mixture

Understand It with Pulse | Flag a mistake

48 **The maximum possible mass of product is 100 g. A student makes 40 g. What is the percentage yield?**

A 50%

B 30%

C 40%

D 80%

Understand It with Pulse | Flag a mistake

49 **How did the oceans form?**

A rivers filled the low land

B water vapour condensed and fell as rain

C ice melted at the poles long ago over time

D the Earth cooled and cracked open

Understand It with Pulse | Flag a mistake

50 **What holds the molecules together in a simple molecular substance?**

A strong ionic bonds between molecules

B weak intermolecular forces

C a sea of delocalised electrons

D strong covalent bonds between molecules

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.