

O Level Combined Chemistry MCQs

The Mole Concept and Stoichiometry Test 1.0

Q1

What is the formula of nickel (II) hydroxide?

- A NiOH
- B NiOH₂
- C Ni(OH)₂
- D Ni₂OH

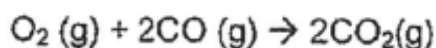
Q2

Which solution of sodium chloride has the greatest concentration?

- A 0.10 mol NaCl in 0.10 dm³ of solution.
- B 0.10 mol NaCl in 10.0 dm³ of solution.
- C 0.01 mol NaCl in 100 cm³ of solution.
- D 0.01 mol NaCl in 1000 cm³ of solution.

Q3

20 cm³ of oxygen are allowed to react with 20 cm³ of carbon monoxide according to the following equation:



What are the volumes of the gases remaining at the original temperature and pressure?

	volume/ cm ³		
	oxygen	carbon monoxide	carbon dioxide
A	0	0	20
B	0	0	40
C	10	0	20
D	10	10	20

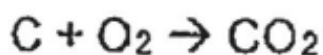
Q4

Element Z has three electrons in the outer shell.
What is the formula of the chloride and oxide of element Z?

	chloride of element Z	oxide of element Z
A	ZCl	ZO
B	ZCl ₃	Z ₂ O ₃
C	Z ₃ Cl	ZO ₃
D	Z ₃ Cl ₃	Z ₃ O ₂

Q5

A 6.0 g of pure carbon is burnt completely in oxygen.



Which volume of carbon dioxide gas is produced, at rtp?

- A 12 dm³
- B 24 dm³
- C 48 dm³
- D 96 dm³

Q6

A sample of 16.0 g of a metal oxide, MO, is reduced to 12.8 g of the metal, M.
What is the relative atomic mass, A_r , of M?

- A 32
- B 64
- C 80
- D 128

Q7

20 g of sodium hydroxide just neutralises 100 cm³ of dilute sulfuric acid according to the following equation:



What is the concentration of dilute sulfuric acid?

- A 0.25 mol/dm³
- B 0.5 mol/dm³
- C 2.5 mol/dm³
- D 5.0 mol/dm³

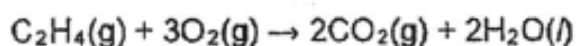
Q8

Which has the greatest mass?

- A 0.1 moles of iodine molecules, I₂
- B 0.5 moles of carbon dioxide, CO₂
- C 1.0 mole of beryllium oxide, BeO
- D 1.0 mole of sodium, Na

Q9

20 cm³ of ethene are reacted with 70 cm³ of oxygen as shown in the chemical equation below.



What is total volume of gas remaining at the end of the reaction?

- A 40 cm³
- B 50 cm³
- C 80 cm³
- D 90 cm³

Q10

To obtain the salt copper(II) carbonate by precipitation, 1 mol of aqueous copper(II) nitrate was mixed with 1.5 mol of aqueous ammonium carbonate.

Apart from copper(II) carbonate, which other substance(s) would be present in the reaction flask at the end of the reaction?

- A ammonium nitrate only
- B ammonium nitrate and ammonium carbonate only
- C ammonium nitrate and copper(II) nitrate only
- D ammonium nitrate; ammonium carbonate and copper(II) nitrate

Answers

The Mole Concept and Stoichiometry Test 1.0

Q1 C

Q2 A

Q3 C

Q4 B

Q5 A

Q6 B

Q7 C

Q8 A

Q9 B

Q10 B

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