

O Level Combined Chemistry MCQs

Acids and Bases Test 1.0

Q1

Four aqueous solution have the pH shown in the table.

solution	P	Q	R	S
pH	2	6	8	10

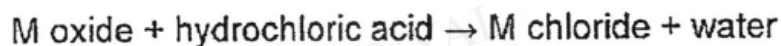
If pairs of solution are mixed, which pair must produce an acidic mixture?

- A P and Q B P and R
C P and S D Q and R

Q2

The oxide of an element M was added separately to hydrochloric acid and aqueous sodium hydroxide.

The word equations for the reactions are shown.



Which row describes M and its oxides?

	M	M oxide
A	metal	acidic
B	metal	basic
C	non-metal	amphoteric
D	non-metal	acidic

Q3

Which substance below will not react with aqueous sodium hydroxide but will react with dilute hydrochloric acid to form a salt and water?

- A nitrogen dioxide
B zinc oxide
C tartaric acid
D copper(II) oxide

Q4

The surface of aluminium saucepans will often oxidise and form a layer of aluminium oxide. This layer of aluminium oxide can be removed by reacting it with both acids and alkalis.

What can you say about the nature of aluminium oxide?

- A Aluminium oxide is acidic.
- B Aluminium oxide is amphoteric.
- C Aluminium oxide is basic.
- D Aluminium oxide is neutral.

Q5

Germanium oxide is a white powder.

Germanium oxide reacts with concentrated hydrochloric acid.

Germanium oxide reacts with concentrated aqueous sodium hydroxide.

Germanium oxide does not dissolve when added to water.

Which type of oxide is germanium oxide?

- A acidic
- B amphoteric
- C basic
- D neutral

Q6

The table shows information about three indicators.

indicator	colour at pH 1	pH at which colour changes	colour at pH 12
congo red	blue	5	red
thymol blue	red	3	yellow
phenolphthalein	colourless	10	pink

Each indicator was added to separate samples of water.

Which colour would be obtained for each indicator?

	congo red	thymol blue	phenolphthalein
A	blue	red	pink
B	blue	yellow	colourless
C	red	yellow	pink
D	red	yellow	colourless

Q7

Both magnesium and magnesium oxide react with dilute sulfuric acid. In what way are both reactions the same?

- A a gas is set free
- B water is a product
- C the pH of the acid decreases
- D a salt is formed

Q8

What would be the best way to slow down the reaction between magnesium and dilute hydrochloric acid?

- A add a catalyst
- B add water to dilute the acid
- C decrease the pressure
- D stir the reaction mixture

Q9

Soil pH in a farm is around 6.0 to 6.5. The farmer wants to grow lilac which grows well in soil with a pH in the range of 7.1 to 8.0.

Which of the following is most suitable to be added to the soil?

- A ammonium nitrate
- B calcium carbonate
- C calcium hydroxide
- D sodium sulfate

Q10

Four oxides are added separately to aqueous sodium hydroxide.

- 1 aluminium oxide
- 2 carbon dioxide
- 3 copper(II) oxide
- 4 magnesium oxide

Which oxide(s) react(s) with aqueous sodium hydroxide?

- A 1 and 2 only
- B 1, 3 and 4 only
- C 2 only
- D 3 and 4 only

Answers

Acids and Bases Test 1.0

Q1 A

Q2 B

Q3 D

Q4 B

Q5 B

Q6 D

Q7 D

Q8 B

Q9 C

Q10 A

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