SL Paper 1

Which descriptions are correct for both a Brønsted–Lowry acid and a Lewis acid?

	Brønsted–Lowry acid	Lewis acid
A.	proton donor	electron pair donor
B.	proton donor	electron pair acceptor
C.	proton acceptor	electron pair donor
D.	proton acceptor	electron pair acceptor

Markscheme

B

Examiners report

[N/A]

Which definition of a base is correct?

A. A Lewis base accepts a proton.

B. A Brønsted-Lowry base accepts an electron pair.

C. A Brønsted-Lowry base donates an electron pair.

D. A Lewis base donates an electron pair.

Markscheme

D

Examiners report

[N/A]

Which substance can act as a Lewis acid but not as a Brønsted–Lowry acid?

A. HCl

B. CH_3COOH

C. BF_3

D. CF_3COOH

Markscheme

C

Examiners report

[N/A]

Which are definitions of an acid according to the Brønsted-Lowry and Lewis theories?

	Brønsted-Lowry theory	Lewis theory
A.	proton donor	electron pair acceptor
B.	proton acceptor	electron pair acceptor
C.	proton acceptor	electron pair donor
D.	proton donor	electron pair donor

Markscheme

A

Examiners report

[N/A]

Which species **cannot** function as a Lewis acid?

A. BF_3

B. $AlCl_3$

C. CCl_4

D. H^+

Markscheme

C

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Whilst 42% correctly identified CCl_4 the most popular wrong answer (38%) was the H^+ ion.

Which statement explains why ammonia, NH_3, is classified as a Lewis base?

A. It can accept a proton.

B. It can accept a lone pair of electrons.

C. It can donate a lone pair of electrons.

D. It can donate a proton.

Markscheme

C

Examiners report

[N/A]
