Solutions

Marking: **K** knowledge, **App** use of the case or data, **An** analysis (a chain of reasons: cause, then effect), **Ev** evaluation (a judgement with a reason). In calculations, **M1** is for the method and **A1** for the answer; **B1** is an independent mark.

Each answer shows the steps, then the **result**.

2.1

(a) out (sunk); (b) in (opportunity cost)

(c) out (in the discount rate); (d) in

2.2

$0.25 \times 12{,}000 = £\mathbf{3{,}000}$ a year

depreciation is not paid in cash, but it lowers the tax that is paid

2.3

taxable profit $80{,}000 - 50{,}000 - 12{,}000 = 18{,}000$

tax £4,500

cash flow $30{,}000 - 4{,}500 = £\mathbf{25{,}500}$

2.4

year 0: $-£\mathbf{5{,}000}$

year 5: $+£\mathbf{5{,}000}$

3.1

(a) tax $0.25 \times (15{,}000 - 6{,}000 - 5{,}000) = £1{,}000$; $9{,}000 - 1{,}000 = £\mathbf{8{,}000}$

(b) −20,000; +8,000 in each of years 1 to 4

(c) the study is sunk: it is paid whatever Nimbus decides, so it is left out; interest is left out of the list because the cost of the loan is already in the discount rate; counting it too would count it twice

3.2

(a) $50{,}000 - 8{,}000 = £\mathbf{42{,}000}$

(b) $42{,}000 \times 0.75 = £\mathbf{31{,}500}$

(c) Nimbus earns that £8,000 anyway at the first site; only the difference the site makes is a gain for the whole business

3.3

7–8: the £8,000 is sunk: it is lost whether the site opens or not, so it cannot be a reason to go ahead (K); going ahead destroys about £3,000 of value today on top of the drawings (App); but the estimate may be wrong: a small change in sales could make the NPV positive, so test the key numbers (An); the site may also bring things the flows leave out, such as learning to run two kitchens or holding a good location (An); recommendation with a condition, e.g. do not open as planned; redesign a cheaper fit-out using the drawings, and go ahead only if the new NPV is positive (Ev). **4–6**: sound analysis with limited use of the case or a weak judgement. **1–3**: relevant points, mostly descriptive.

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