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

$0.4(50) + 0.4(20) + 0.2(-15)$

$=$ £**25**k

2.2

with perfect information: $20 + 8 + 0 =$ £28k

$EVPI = 28 - 25 =$ £**3**k

knowing the festival will die, Nimbus would not invest, so that payoff becomes 0

2.3

no

even perfect information is worth only £3k, so no study can be worth £5k

2.4

a number and a date, e.g. "If pre-orders are more than 20% below plan by week 4"

an action, e.g. "…we stop the expansion and keep the pilot only"

3.1

(a) $0.3(60) + 0.7(-20) =$ £**4**k

(b) $0.3(60) + 0.7(-3)\ -6 =$ £**9.9**k

(c) $9.9 - 4 =$ £**5.9**k

(d) the pilot cuts the loss in the bad case from £20k to £3k; the good case is unchanged

3.2

a forecast is one best guess; scenarios are several possible futures, each planned for

trigger: a measure with a number, e.g. pre-orders 20% below plan; a date, e.g. by week 4; an action, e.g. the expansion option lapses

3.3

7–8: "adapt as we go" sounds flexible, but without triggers decisions are made late and under pressure (An); options cost a little now and cut losses in bad outcomes, as the pilot's £5.9k shows (App); EVPI caps information spending at £3k, which avoids overpaying for research (K); but options take management time, and too many small trials can distract from the main business (An); triggers can also be set badly, so they need review (Ev); recommendation with a condition, e.g. the adviser's plan, with each trigger owned by a named person and reviewed at a set date (Ev). **4–6**: sound analysis with limited use of the data or a weak judgement. **1–3**: relevant points, mostly descriptive.

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