Solutions

Marking: **M1** a correct method, **A1** the correct answer, **B1** an independent mark.

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

2.1

vascular: **stroke** (or bleed)

infective: **urine or chest infection**

metabolic: **low sodium, low glucose** (or high calcium)

2.2

any two of: heart attack (ACS); pulmonary embolism; aortic dissection; tension pneumothorax; oesophageal rupture

2.3

A: **availability**

B: **confirmation bias** (or anchoring)

C: **diagnostic momentum**

2.4

any two of: which warning signs to watch for (e.g. a rash that does not fade, drowsiness); when to come back or how long to wait; how to get help (who to call, out of hours)

3.1

(a) **ruptured ectopic pregnancy** first; then any two of: miscarriage; ovarian cyst torsion or rupture; appendicitis; urine infection

(b) the positive pregnancy test, with shock signs (fast pulse, low BP), makes ruptured ectopic pregnancy very likely

(c) urgent senior gynaecology review, with IV access, bloods and cross-match, and an urgent ultrasound or theatre

3.2

(a) pre-test odds $= 0.1/0.9 = 0.111$; post-test odds $= 0.111 \times 8 = 0.889$; probability $= 0.889/1.889 \approx$ **47%**

(b) yes: odds fall to about 0.011, so the probability is about 1%

(c) it adds cost, delay and possible harm (false positives) without helping the patient

3.3

(a) urine infection; low sodium; the new drug, tramadol (side effects)

(b) **Hickam's dictum**

(c) premature closure (or anchoring): other causes, such as the drug or low sodium, could be missed

exercises.lol exercises.com.cn

(d) review and stop or change the tramadol; check all his drugs for others that cause confusion or low sodium