

**Question 28** (Answer: **C**)

- Rusting needs both oxygen and water, so any method that keeps them out works.
- Greasing and painting both form a barrier over the surface.
- Washing with distilled water adds water rather than excluding it, so it does not prevent rust.

**Question 27** (Answer: **A**)

- Covering the nail completely keeps out both air and water – a barrier method.
- Zinc is also more reactive than iron, so it corrodes in preference.
- It is that greater reactivity, not the coating alone, that explains why zinc is chosen.

**Question 29** (Answer: **C**)

- Galvanising coats the iron with \*zinc\*, not silver – statement 1 is wrong.
- The zinc layer is a physical barrier keeping out air and water – statement 2 is right.
- Zinc is also more reactive, so it protects sacrificially even where scratched – statement 3 is right.

**Question 27** (Answer: **B**)

- Galvanising coats the iron with zinc, which keeps air and water out – a barrier method, so statement 1 is right.
- Zinc is also \*more\* reactive than iron, so it corrodes in preference – sacrificial protection, statement 3.
- That is why a scratch does not matter: the exposed iron is still protected, so statement 2 is wrong.

**Question 27** (Answer: **A**)

- Sacrificial protection works because the protecting metal is \*more\* reactive.
- Zinc lies above iron in the reactivity series, so zinc loses electrons in preference.
- The zinc corrodes instead of the iron, and is replaced when used up.