

**Q12** Select from the key the statement in which we have the greatest confidence about the interior of Uranus.

KEY for Q12

- A The core of Uranus is no longer undergoing a process of differentiation and has cooled down. ☒
- B The core of Uranus must contain iron, Fe, in order to account for its magnetic field. ☒
- C All the rocky material in Uranus is contained in a small core. ☒
- D Uranus contains a higher proportion of heavy elements (heavier than He) than do Jupiter or Saturn. ☒
- E The core of Uranus has a solid surface. ☒
- F The magnetic field of Uranus cannot originate in the icy layers because ice is not a good electrical conductor. ☒

Pencil across *one* cell in row 12.

**Q13** In Figure 7.9 of Book 2,  $\text{H}_2\text{O}$  clouds are shown forming at around 250 K on Saturn. Firstly, would these clouds be composed of ice or water particles, and secondly, what would be the maximum fraction of  $\text{H}_2\text{O}$  in the gas just above these clouds? Pencil across *one* of the cells A-C and *one* of the cells D-H. Take the pressure of Saturn's atmosphere at 250 K as 5 bar.

KEY for Q13

- A Water
- B Ice
- C The clouds would not exist because the partial pressure of  $\text{H}_2\text{O}$  is too low.
- D  $10^{-3}$
- E  $5 \times 10^{-3}$
- F  $2 \times 10^{-4}$
- G 0.2
- H 1

Pencil across *two* cells in row 13.