



Give the marks for the points in the marking scheme; an answer in other words that says the same is right.

1 Key words

1. crust
2. 5000
3. weathering
4. Sun
5. Mercury
6. Venus
7. deposition
8. spring

K • 4

Each carries 0.5 mark.

2 Label the diagram

- | | |
|-----------|---------------|
| 1. Crust | 3. Outer core |
| 2. Mantle | 4. Inner core |

K • 2

Each carries 0.5 mark.

3 Multiple choice

- i. b. very high pressure

U • 1

The inner core is hottest, so heat can't be what keeps it solid: heat melts things. It is the enormous **pressure** of all the layers above that squeezes it solid.

- ii. b. subsoil

K • 1

Topsoil (A) is first, **subsoil** (B) second, then the C-horizon and bedrock.

- iii. d. comets

K • 1

Comets grow broom-like tails when they come near the Sun.

- iv. c. Shrawan and Bhadra

K • 1

Shrawan and Bhadra make the rainy season (Barsha). Nepal's seasons pair Chaitra–Baisakh, Jestha–Asar, Shrawan–Bhadra, Ashwin–Kartik, Mangsir–Poush and Magh–Falgun, so the other three pairs each cut across two seasons.

- v. c. It has the air, water and temperature that suit living things.

U • 1

Life needs all three: water, air and a suitable temperature. Each of the other options names only one of them. (As far as we know, the Earth is the only place with life.)

4 True or false

MARKING SCHEME

K • 2

- ✓ i. true; ii. false.
✓ iii. false; iv. false.

5 Very short answers

- a. MARKING SCHEME

K • 1

✓ The loose top layer of the land, of rock particles, humus, air and water.

- b. MARKING SCHEME

K • 1

✓ The imaginary line through the Earth's center joining the North and South Poles.

- c. MARKING SCHEME

K • 1

✓ A body that goes round a planet, with an example such as the Moon.



6 Short answers

a. MARKING SCHEME

U · 2

- ✓ Any one difference, e.g. big bodies of rock or gas; small balls of ice and dust.
- ✓ Any second difference, e.g. nearly circular orbits; long elliptical orbits, or no tail; a tail near the Sun.

b. MARKING SCHEME

U · 2

- ✓ Any one difference, e.g. burn up in the air; reach the ground.
- ✓ Any second difference, e.g. seen only as a streak of light for a second; can be picked up and kept.

c. MARKING SCHEME

U · 2

- ✓ Soil carried away by water or wind must be laid down somewhere when it slows down.
- ✓ So erosion in one place means deposition in another (e.g. a river cuts its banks in the hills and drops the soil on the plains).

d. MARKING SCHEME

U · 2

- ✓ The Sun is a star, a huge ball of hot gas that gives out heat and light.
- ✓ The Earth gets almost all its heat and light from it.

7 Long answer

ANSWER

U · 4

The crust is the outermost and thinnest layer, 5–70 km thick, of rocks and soil; we live on it. The mantle is the thickest layer, about 2,900 km, of hot rock. The core is the innermost part, of iron and nickel: the outer core is liquid, and the inner core, over 5,000 °C, is solid. The inner core is solid because the weight of all the layers above presses on it with an enormous pressure, which keeps the metal from melting.

MARKING SCHEME

- ✓ Crust: the outermost, thinnest layer (5–70 km), of rocks and soil.
- ✓ Mantle: the thickest layer (about 2,900 km), of hot rock.
- ✓ Core: the innermost part, of iron and nickel; the outer core liquid, the inner core solid.
- ✓ The inner core is solid because of the enormous pressure of the layers above.

8 Think

ANSWER

HA · 2

Polythene bags don't rot: thrown away, they stay in the soil for hundreds of years, breaking only into tiny bits. In the soil they block water and air from reaching roots and soil life, harm the living things that keep the soil fertile, and make plants grow poorly. Bags also block drains and ditches, so rainwater floods and washes soil away. So banning polythene bags, and using cloth or paper bags instead, prevents soil pollution and helps conserve the soil.

MARKING SCHEME

- ✓ Polythene bags don't rot: they stay in the soil for hundreds of years and block water and air from roots and soil life, so the soil becomes less fertile.
- ✓ So banning them (using cloth or paper bags) keeps the soil clean and fertile, which conserves it (bags also block drains, causing floods that wash soil away).



9 Activity: Soil from two places (Activity 11.1)

(not marked)

WHAT STUDENTS SHOULD FIND

Garden soil: small stones, sand, bits of dead leaves and roots, perhaps a worm; mixed fine grains and crumbs; dark brown; a little wet. Path soil: sand and small stones, almost no plant bits; mostly sand and grit; light brown or gray; dry. The garden soil has more humus: it is darker and has bits of rotted plants.

Marks by level	Knowledge	Understanding	Application	Higher ability	Total
Marks	14	14	0	2	30

