



Attempt questions first; check the separate key afterward. Show all working. Draw accurate figures where required.

A. Very short answers - 1 mark each

1. Name three conditions supporting life on Earth.
2. Explain why liquid water is important to living systems.
3. Which gas forms the largest fraction of Earth's atmosphere?
4. Which gas do humans use in aerobic respiration?
5. About what fraction of Earth's surface is covered by water?
6. Why is usable freshwater much scarcer than total water suggests?
7. What is the main energy source for most surface ecosystems?
8. Explain how plants connect sunlight to food chains.

B. Short answers / practice - 2 marks each

9. Name the atmospheric layer containing most weather.
10. Explain the atmosphere's role in moderating temperature.
11. Does Earth have a natural greenhouse effect?
12. Explain why it is helpful but strengthening it can cause problems.
13. Name a gas linked to fossil-fuel combustion and global warming.
14. Describe two ways to reduce unnecessary fuel use.
15. Is soil a renewable resource on the timescale of rapid erosion?
16. Explain how vegetation protects soil.
17. A family saves 20 L of water daily. Find saving in 30 days.
18. Find saving in 365 days.
19. Can rainwater harvesting support groundwater recharge?
20. Draw a simple roof-rainwater collection system.

C. Application / reasoning - 3 marks each

21. Name one biodegradable and one persistent waste material.
22. Explain reduce, reuse and recycle using household examples.
23. A school uses 1000 sheets weekly and reduces use by 25%. Find sheets saved.
24. Find annual saving for 40 school weeks.
25. Does the Moon have Earth-like surface conditions for ordinary human life?
26. Compare atmosphere, water and temperature conditions on Earth and Moon.
27. A tap leaks 2 L per hour. Find water lost in one week.
28. Explain why protecting wetlands helps both wildlife and water management.
29. A class cuts weekly paper use from 800 to 600 sheets. Find percentage reduction.
30. Does burning plastic make the material harmless?
31. Compare conserving an existing forest with planting a few replacement trees.
32. Why must both living organisms and their habitats be protected?
33. Explain the connection between water, soil, air and life.
34. Is one person's conservation action a substitute for wider community action?
35. Design a measurable month-long school project to reduce water, energy or waste and explain how success will be evaluated.

ANSWER KEY - Numerical / closed questions

- 1) Examples: liquid water, suitable temperatures, protective atmosphere. 3) Nitrogen. 4) Oxygen. 5) About 71%. 7) Sun. 9) Troposphere. 11) Yes. 13) Carbon dioxide. 15) Not readily; formation is slow. 17) 600 L. 18) 7300 L. 19) Yes, with suitable safe design. 21) Example: vegetable peel; ordinary plastic. 23) 250. 24) 10000 sheets. 25) No. 27) 336 L. 29) 25%. 30) No; it can release harmful pollutants. 34) No; both matter.