

1.2 Terrestrial Biomes

Name: _____ Class: _____ Date: _____ **Total: 9 marks**

KEY WORDS biome 生物群系 • desert 沙漠 • temperature and precipitation 温度和降水
• tropical rainforest 热带雨林

Objective

Build the skills to answer exam questions on **terrestrial biomes**.

You must be able to:

- explain that **biomes** 生物群系 are determined mainly by **temperature and precipitation** 温度和降水
- match a biome to its climate
- name key terrestrial biomes

1 Worked examples

Study these first. Each one shows the method for a question type used later — follow the steps and you can do the Practice and Exam-style questions yourself.

■ What sets a biome

A **biome** is a large region with a characteristic climate and community. **Terrestrial biomes** are determined mainly by **temperature** and **precipitation**.

■ The main terrestrial biomes

- **Desert** — very low precipitation.
- **Tropical rainforest** — hot and very wet.
- **Grassland** — moderate rainfall, seasonal.
- **Temperate forest** — moderate temperature and rainfall.
- **Taiga (boreal forest)** — cold, coniferous.
- **Tundra** — very cold, low precipitation, frozen soil (permafrost).

■ Reading a climate

Given a climate (e.g. hot, very wet), identify the biome (tropical rainforest). Given the biome, describe its climate.

■ A worked match

A region with high temperature and high rainfall all year → **tropical rainforest**, with high biodiversity.

2 Practice

Now apply the methods above.

2.1 What two climate factors mainly determine a terrestrial biome? [2]

2.2 Which biome has very low precipitation? [1]

2.3 Which biome has frozen soil (permafrost)? [1]

3 Exam-style questions

3.1 Terrestrial biomes are determined mainly by temperature and [1]

- **A** soil color
- **B** precipitation
- **C** altitude only
- **D** wind speed

3.2 A region is hot with heavy rainfall year-round.

(a) Name the biome. [1]

(b) State one feature you would expect there. [1]

3.3 Explain why deserts and tropical rainforests differ so greatly despite both being warm. [2]

Solutions

2.1 Temperature and precipitation.

2.2 Desert.

2.3 Tundra.

3.1 B — precipitation.

3.2 (a) Tropical rainforest. (b) Any one: high biodiversity, tall dense trees, high productivity.

3.3 They differ mainly in **precipitation** — a desert is very dry while a rainforest is very wet — which controls the plants and animals that can live there.