

2.2 Consequences of Population Distribution

Name: _____ Class: _____ Date: _____ **Total: 10 marks**

KEY WORDS carrying capacity 环境承载力 • arithmetic density 算术密度
• population distribution 人口分布 • dependency ratio 抚养比 • migration 迁移

Objective

Build the skills to answer exam questions on the consequences of **population distribution** 人口分布 and **carrying capacity** 环境承载力.

You must be able to:

- define **carrying capacity** 环境承载力
- explain economic effects of dense or sparse population
- explain political effects (representation, services)
- explain social and environmental effects of clustering

1 Worked examples

Study these first. Each one shows the method for a task used later.

■ Carrying capacity

Carrying capacity is the number of people an area can support with its resources. Exceeding it strains water, food, and the environment.

■ Economic and political effects

Dense areas concentrate labour, markets, and services but strain housing and transport. Distribution also shapes **political power** — where people live decides representation and where governments invest.

■ Social and environmental effects

Clustering raises pressure on land, water, and air, and can cause crowding — but also supports services (schools, hospitals) that need a large local population.

2 Practice

2.1 Define carrying capacity. [2]

2.2 State one economic advantage and one disadvantage of a densely populated area. [2]

2.3 A remote region has a very sparse population.

(a) State one difficulty of providing services there. [1]

(b) Explain why this region may have little political influence. [1]

3 Exam-style questions

3.1 If a region's population exceeds what its resources can sustain, it has exceeded its [1]

- **A** arithmetic density
- **B** carrying capacity
- **C** dependency ratio
- **D** sex ratio

3.2 A benefit of a concentrated population for public services is that [1]

- **A** services are cheaper to provide per person
- **B** the environment is always protected
- **C** carrying capacity rises automatically
- **D** migration stops

3.3 A crowded coastal city keeps growing.

- (a) State one environmental consequence of this concentration. [1]
- (b) Explain one reason people still move there despite crowding. [1]
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Solutions

2.1 the maximum population an area's resources/environment can support sustainably.

2.2 advantage: large labour force/market, services viable; disadvantage: strain on housing/transport/resources.

2.3 (a) services (schools, hospitals) are costly per person / far apart. (b) few people means fewer representatives/votes, so less political weight.

3.1 B. the sustainable maximum is the carrying capacity.

3.2 A. concentration makes services viable at lower cost per person.

3.3 (a) pressure on water/air/land, pollution, loss of green space. (b) jobs, services, and opportunities outweigh the crowding for migrants.