

5.8 Von Thünen Model

Name: _____ Class: _____ Date: _____

Total: 10 marks

KEY WORDS von thünen model 冯·杜能模型 • transport cost 运输成本 • extensive 粗放

Objective

Build the skills to answer exam questions on the **Von Thünen model** 冯·杜能模型 of land use.

You must be able to:

- state the Von Thünen model's key assumption
- describe the order of the land-use rings
- explain how **transport cost** 运输成本 shapes the rings
- state one limitation of the model

1 Worked examples

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

■ The model

The **Von Thünen model** predicts farm land use around a central market. Its key driver is **transport cost**: perishable or heavy goods locate close to market, cheaper-to-move goods farther out.

■ The rings

From the centre outward: **market gardening/dairy** (perishable), **forest** (heavy fuel/timber, historically), **field crops/grain**, then **ranching/livestock** on the outer ring.

■ Limitations

It assumes a flat, uniform land with one market and no roads or rivers — real geography, refrigeration, and transport change the pattern.

2 Practice

2.1 State the main factor that determines land use in the Von Thünen model. [2]

2.2 Explain why perishable goods like dairy locate near the market. [2]

2.3 A modern region uses refrigerated trucks and highways.

(a) State one Von Thünen assumption this breaks. [1]

(b) Explain how it changes the ring pattern. [1]

3 Exam-style questions

3.1 In the Von Thünen model, ranching and livestock are located [1]

- **A** nearest the market
- **B** in the outermost ring
- **C** in the forest ring
- **D** at the exact centre

3.2 The Von Thünen model's central assumption is that transport cost rises with [1]

- **A** population
- **B** distance from the market
- **C** soil quality
- **D** rainfall

3.3 Dairy farms cluster close to a city in the model.

(a) Explain why, using transport cost. [1]

(b) State one real-world factor the model ignores. [1]

Solutions

2.1 transport cost to the central market; perishability/weight of the product.

2.2 they spoil quickly and are costly to transport; being close cuts transport time/cost/spoilage.

2.3 (a) uniform transport / no roads / perishables must be near market. (b) perishables can be grown farther out, so the neat rings break down.

3.1 B. cheap-to-move, land-extensive ranching sits in the outer ring.

3.2 B. transport cost increases with distance to market.

3.3 (a) milk is perishable and costly to move, so it is produced near the market. (b) roads/rivers, refrigeration, varied terrain, or multiple markets.