

4.2 Inventory management

Name: _____ Class: _____ Date: _____

Total: 29 marks

KEY WORDS inventory 库存 • re-order level 再订货水平 • buffer inventory 缓冲库存 • lead time 交货周期
• just-in-time 准时制

Objective

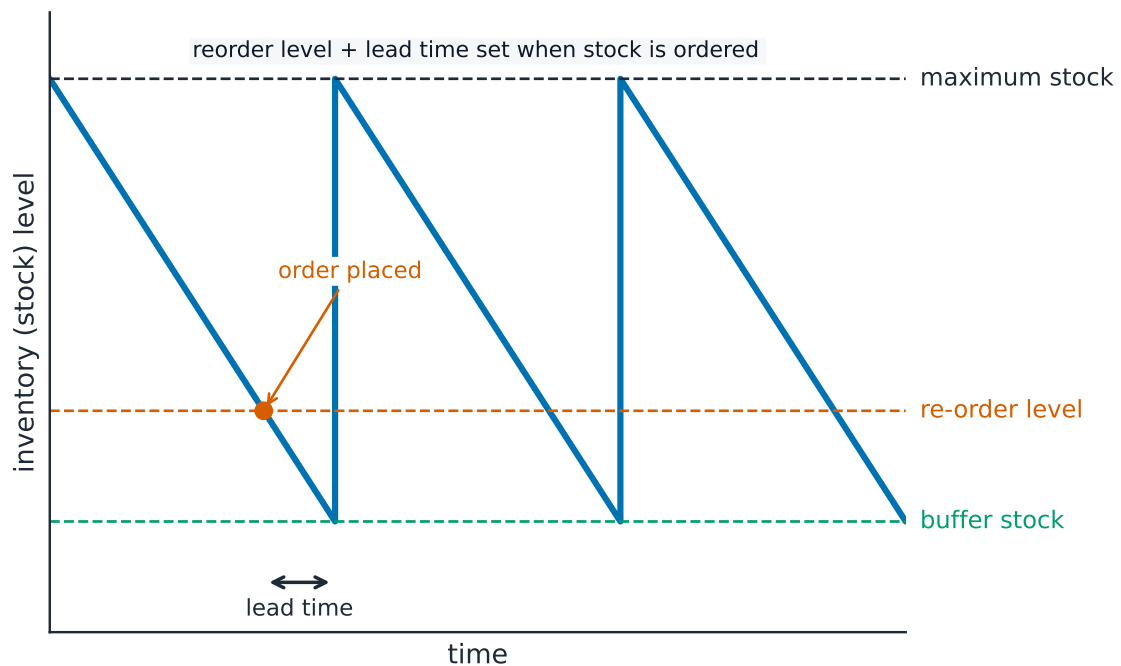
Build the skills to answer exam questions on **inventory management** 库存管理 — why firms hold **inventory** 库存, the **inventory control chart** 库存控制图 (re-order level, lead time, buffer stock), and **just-in-time** 准时制 versus **just-in-case** 备货制.

You must be able to:

- explain the costs and benefits of holding inventory
- read an inventory control chart (re-order level, lead time, buffer, maximum)
- analyse and evaluate JIT versus JIC stock control

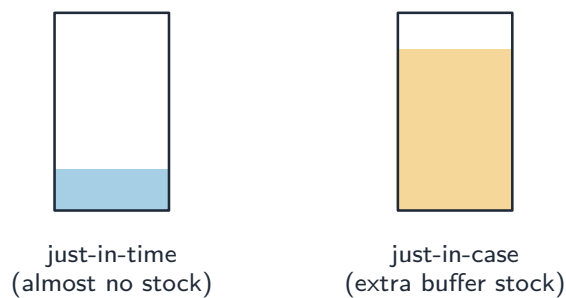
1 Worked examples

- Reading an inventory control chart



Stock falls as it is used, an order is placed at the re-order level, and arrives after the lead time

- **Re-order level:** the stock level that triggers a new order. **Lead time:** order → delivery.
- **Buffer inventory:** minimum safety stock for delays/extra demand. **Maximum inventory:** the most held.
- **JIT:** stock arrives as needed → almost none held → low holding cost, but a late delivery stops production. **JIC:** extra stock held → safer, but costs more to store.



Just-in-time versus just-in-case stock control

Answer shapes: AO1 + AO2 + AO3 (reasoning chain) + AO4 (a supported judgement *in context*).

2 Practice

2.1 Define the term *buffer inventory*. [2]

2.2 State what is meant by *lead time*. [2]

2.3 State two costs to a business of holding inventory. [2]

3 Exam-style questions

3.1 Explain one reason why a business holds buffer inventory. [3]

3.2 Analyse two benefits to a business of using a **just-in-time** (JIT) system. [8]

[12]

Solutions

Business answers are marked by **level of response** against the assessment objectives: award **AO1** knowledge, **AO2** application, **AO3** analysis and **AO4** evaluation.

2.1 a minimum level of “safety” stock kept in case of delays in delivery or extra demand (2 for a clear definition; 1 for a partial idea).

2.2 the time between placing an order and receiving the goods (2 for a clear idea; 1 for a partial idea).

2.3 any two of: storage cost; insurance; money tied up in stock; risk of goods going out of date or being damaged (1 + 1).

3.1 [3] **AO1** 1 — name a reason (to avoid running out; to cover late deliveries or demand spikes). **AO2** up to 2 — develop it, e.g. buffer stock lets the firm keep selling if a delivery is late → no lost sales → customers stay satisfied (2 developed / 1 limited).

3.2 [8] For **each** of two benefits: **AO1** 1 + **AO2** 1 + **AO3** up to 2. Example chains — *lower holding cost*: almost no stock held → less storage and insurance → lower costs and more cash free. *Less waste*: stock does not sit and expire → fewer write-offs → lower costs. Maximum 4 per benefit, 8 total.

3.3 [12] **AO1** 2 / **AO2** 2 / **AO3** 2 / **AO4** up to 6. **For JIT**: lower holding costs, less waste, more cash and space. **Against**: a late delivery can halt production, it needs reliable suppliers and good IT, and there is no buffer for demand spikes. Judgement: JIT suits a firm with dependable local suppliers and steady demand, but a firm with unreliable supply or volatile demand may keep some buffer — it depends on supplier reliability and demand stability.