

CASE STUDY BASED PUZZLE

ER20-25T:HOSPITAL AND CLINICAL PHARMACY

UNIT 2: SUPPLY CHAIN AND INVENTORY CONTROL

CASE STUDY PUZZLE

Topic: Supply Chain and Inventory Control in Hospital Pharmacy

CASE STUDY SCENARIO

CityCare Multispecialty Hospital is a 500-bed tertiary care hospital with a Central Drug Store (CDS) that supplies medicines to ICU, Emergency, OPD, and wards.

Recently, the hospital faced the following issues:

- Shortage of emergency and high-risk drugs
- Overstocking of some antibiotics leading to expiry losses
- Improper cold chain maintenance
- Delay in procurement due to poor tender planning
- Non-compliance in NDPS and Schedule H1 documentation

The Hospital Pharmacy Committee has appointed you as a trainee pharmacist to analyze the situation and solve the problems.

PUZZLE 1: DRUG LIST CLASSIFICATION (MATCH & IDENTIFY)

Task:

Match the drugs with their correct drug list category.

Drugs	Categories
A. Insulin Injection	1. Schedule H1
B. Morphine	2. High-risk drug
C. Linezolid	3. NDPS drug
D. Adrenaline	4. Reserved

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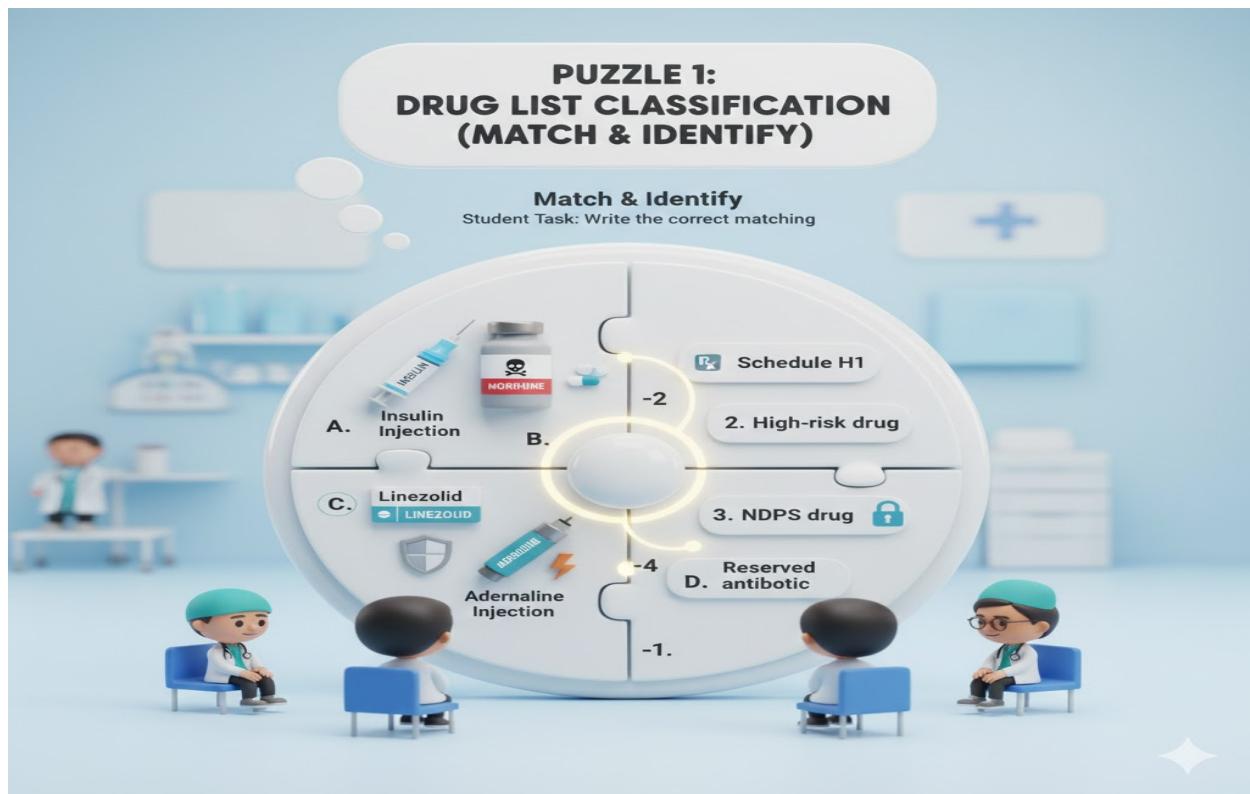
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Injection antibiotic

Puzzle Question:

Write the correct matching (Example: A-2, B-3...)



PUZZLE 2: PROCUREMENT PATHWAY MAZE

The hospital needs to purchase chemotherapy drugs for the next 3 years.

Task:

Choose the correct purchase procedure by filling the blanks:

1. For urgent emergency drugs, the hospital should use _____ procurement.
2. For long-term bulk supply, the best method is _____.
3. Competitive pricing and transparency are ensured by _____ process.

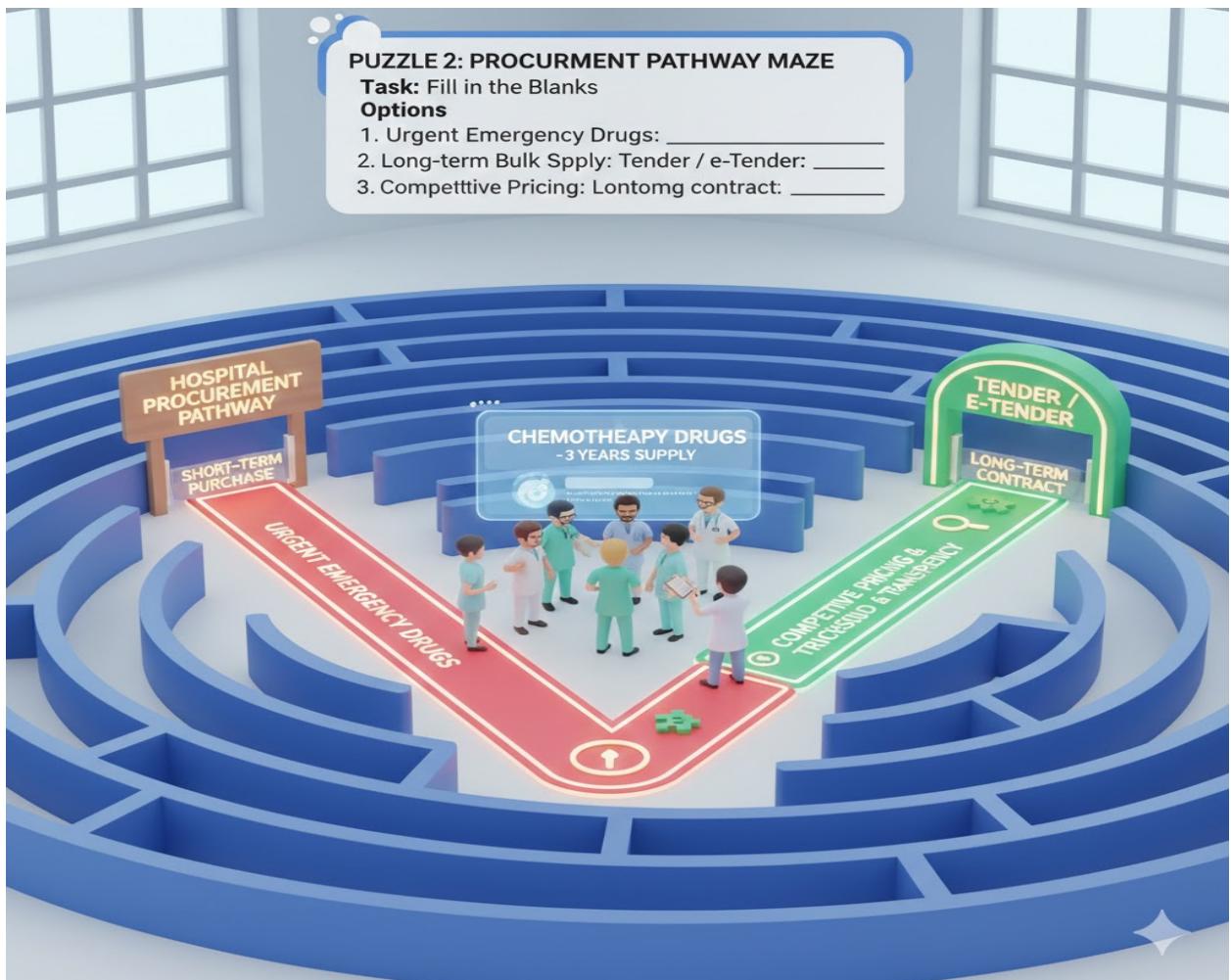
Options:

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- Short-term purchase
- Tender / e-Tender
- Long-term contract



PUZZLE 3: INVENTORY CALCULATION CHALLENGE (EOQ)

Data:

- Annual demand for Inj. Ceftriaxone = 10,000 vials
- Ordering cost per order = ₹500

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- Holding cost per vial per year = ₹20

Q Task:

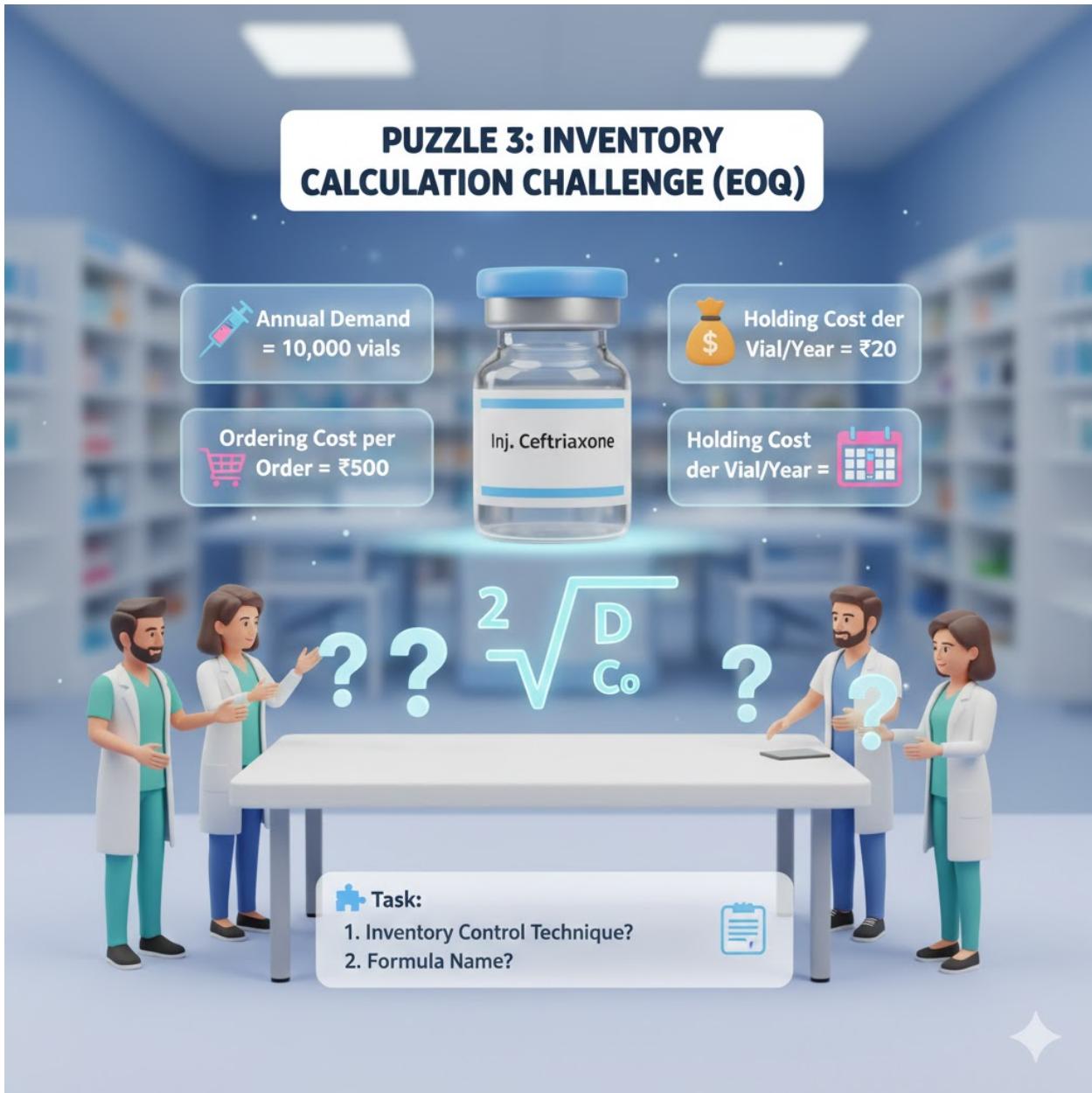
Identify:

1. Which inventory control technique is used here?
2. Write the formula name used (no calculation required).

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PUZZLE 3: INVENTORY CALCULATION CHALLENGE (EOQ)

Annual Demand = 10,000 vials

Ordering Cost per Order = ₹500

Holding Cost per Vial/Year = ₹20

Holding Cost per Vial/Year = ?

Inj. Ceftriaxone

$$\sqrt{\frac{2D}{C_o}}$$

Task:

1. Inventory Control Technique?
2. Formula Name?