inventory_replenishment - Questions

Q1. Which situation will reduce Service Level but may leave Fill Rate almost unchanged?

A. Missing a large demand spike on a single day
B. Fulfilling all demand but only after long delays
C. Running out of stock on a low-demand day
D. Supplier delivering early and increasing on-hand inventory

Correct answer: C. Running out of stock on a low-demand day

Q2. A stockout occurred on a day where demand was far above mean plus standard deviation, while lead time remained normal. What is the most likely root cause?

A. Late supplier
B. Demand spike
C. Both demand spike and late supplier
D. Insufficient dataset quality

Correct answer: B. Demand spike

Q3. If On-Hand Inventory is 480 units and recent average daily demand is 80 units, how many days of cover remain?

A. 4 days
B. 5 days
C. 6 days
D. 7 days

Correct answer: C. 6 days

Q4. Which change will increase Safety Stock the most, assuming all else equal?

A. Reducing the service target (lower z-score)
B. Lowering daily demand volatility (lower sigma)
C. Increasing supplier lead time from 4 to 9 days
D. Keeping sigma and L constant but increasing receipt quantity

Correct answer: C. Increasing supplier lead time from 4 to 9 days

Q5. You compute a Reorder Point (ROP) of 460 units. Current Inventory Position (On-Hand plus On-Order minus Backorders) is 390 units. What should happen next?

A. No action; inventory is above the threshold
B. Increase safety stock first, then decide
C. Place a replenishment order now

D. Reduce demand temporarily to avoid stockouts

Correct answer: C. Place a replenishment order now