

8. Your ERP/WMS is cloud-hosted. Create a risk register for supply-chain tech (ransomware, credential theft, API abuse, IoT spoofing). For each, map controls (IAM/MFA, network segmentation, SOC alerts, backups/RPO-RTO testing) and a table-top drill plan for the operations team.

[This question paper contains 4 printed pages.]

Your Roll No.....

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Name of the Paper : TECHNOLOGY IN SUPPLY
CHAIN MANAGEMENT

Name of the Course : **B.A. (VS) Material
Management**

Semester : V

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions.
3. **All** questions carry equal marks.

1. A mid-size auto-components firm still runs purchase requests and gate entries on paper. Map the “as-is → to-be” process for Requisition → PO → GRN → Put-away, identifying digital touchpoints (master data, approvals, device choices). List three quick-win automations and five KPIs you’ll track in the first 90 days.

2. Your company has seasonal demand with long supplier lead times. Compare MRP in ERP vs a separate APS module for planning. For the next quarter, propose which to use and why, specifying: BOM accuracy needs, lead-time modeling, exception messages, and how you'll configure safety stock vs safety time.
3. A new 3,000-m² warehouse will store SKUs with varied unit sizes. Design the WMS setup: location coding, ABC/velocity zoning, barcode symbology (EAN-13/Code-128) vs RFID trade-offs, and put-to-light/pick-to-light options. Finish with a cycle-count policy and the data fields required on a license plate label.
4. You have 24 months of sales and promotion flags for 50 SKUs. Outline the tech-enabled S&OP cadence and the forecasting workflow (baseline model choices, promo uplifts, error metrics like MAPE/WAPE). State how you will segment SKUs (e.g., ABC-XYZ) and link that to planning parameters.

5. For a pharma distributor with expiry constraints, propose a reorder policy supported by tech: which demand signal, minimum remaining shelf-life rule, FEFO picking logic, and a dashboard tile showing stock at risk of expiry. Explain how you'd simulate service level vs working capital before go-live.
6. Design an IoT sensor network for a dairy's cold chain: sensor types, sampling frequency, alert thresholds, data backhaul, and automated exception handling in TMS/WMS. Provide a CAPEX-OPEX outline and how you'll prove ROI with temperature excursion reduction metrics.
7. A customer demands farm-to-fork traceability for spices. Draft a minimal blockchain pilot: what events/records to write (harvest lot, processing batch, QC, shipment), how to integrate QR at consumer end, and how you'll manage off-chain vs on-chain data. List two legal/compliance considerations.