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Les exercices décrits présentent les implications financières et logistiques des Incoterms, visant à éclairer les participants sur les distinctions entre l'Incoterm, en mettant en relief les distinctions entre DAP (Delivered at Place) et d'autres catégories. Les Incoterms constituent la base élémentaire du commerce international, servant de référence pratique pour aborder les complexités des échanges internationaux. Corrigé d'exercice sur détermination des produits fabriqués et achetés : gestion de production. ****Gestion de production**** La gestion de production est une discipline cruciale dans les entreprises manufacturières et de services. Elle vise à optimiser les ressources, améliorer la productivité et garantir une qualité constante. ****Exercices corrigés**** Les 10 exercices suivants couvrent divers aspects de la gestion de production : 1. Analyse de l'affaire dans le contexte d'une politique de planification des tâches. 2. Calcul de durée moyenne de réalisation des tâches en utilisant la méthode pert probabiliste. 3. Durée de fabrication si on fabrique au plus tôt dans l'ordre des numéros de produit. 4. Détermination de l'algorithme d'ordonnement qui permet de minimiser le temps global de réalisation de la production. 5. Prise de décisions pour réaliser les prévisions de charge en matière de gestion de production. 6. Optimisation de la gestion de production : durée de fabrication avec lot de transfert sans chevauchement des temps série. 7. Détermination du nombre de pièces que doit contenir chaque container. 8. Valeurs des temps morts et de la cadence journalière de la chaîne de production. 9. Cycle de fabrication minimum sans diminuer le temps opératoire de chaque phase de production. 10. Méthode des chaînons : canevas d'implantation par la méthode des chaînons sous forme d'exercice corrigé. ****Gestion de production 2**** Les 10 exercices suivants couvrent divers aspects de la gestion de production : 1. Cas pratique sur la Gestion des stocks en se basant sur une analyse ABC. 2. Délais, Coûts : lancement en production/lot transfert et coût des différents coûts liés à la production. 3. Quantité économique de chaque gamme du produit étudié dans l'exercice. 4. Détermination des quantités liées à la gestion de production et stocks. 5. Gestion d'approvisionnement et Flux de production. 6. Exercice sur les deux cas : Fonctionnement en flux poussé et Fonctionnement en flux poussé. 7. Initialisation et calcul : suggestions de fabrication et d'approvisionnement qui correspondent aux prévisions de ventes. 8. Evolution des différents types de stocks. 9. Planning d'atelier ; le planning de fabrication en tenant compte les engagements de livraison pris par l'entreprise. ****Maîtrise de la gestion de production**** Ces exercices vous offrent une maîtrise approfondie de la gestion de la production, tout en vous aidant à décrypter les défis clés liés à l'optimisation des ressources et à l'amélioration de la performance industrielle. ****Facteurs de production**** Associez chaque élément suivant à un facteur de production (Travail, Capital, Matières premières) : 1. Travail 2. Capital 3. Matières premières ****Production Systems and Industries**** 1. CNC Machine: Produces parts made of iron and aluminum. 2. Production Management Software: Manages production logistics. ****Types of Production**** 1. Mass Production: Automobile, Raffinerie de pétrole 2. On-Demand Production: Boulangerie sur commande, Fabrication de meubles sur mesure 3. Continuous Production: Raffinerie de pétrole 4. Artisanal Production: Fabrication de meubles sur mesure ****Machine Efficiency**** A machine operates for 10 hours a day with 1 hour lost due to adjustments and 1 hour due to downtime. The production efficiency is 80%. Calculate the Global Return Rate (TRG) using the formula: TRG = Availability × Performance × Quality Availability = (Total time - Downtime) / Total time Performance = 80% Quality = 100% ****Schedule Planning**** An atelier of production has to perform 3 operations in a specific order: A3, B5, C4. Represent the schedule using a Gantt diagram. ****Cost Calculation**** A company produces 1000 units of a product with costs: Materials: €5000 Labor: €3000 Fixed expenses: €2000 Calculate the unit cost: Unit cost = (Total cost) / (Number of units produced) Total cost = €5000 + €3000 + €2000 = €10,000 Unit cost = €10,000 / 1000 = €10/unit ****7 Types of Waste (Muda)**** Identify the 7 types of waste in a manufacturing process: 1. Idle machine time 2. Excessive inventory 3. Waiting for parts 4. Defects leading to rework 5. Unnecessary transportation 6. Poor use of human resources 7. Overproduction ****Just-in-Time (JIT) System**** Adopting JIT can bring benefits and drawbacks: Benefits: Reduced inventory, reduced storage costs, increased flexibility Drawbacks: Strong dependence on suppliers, risk of stockouts, requires rigorous planning ****Takt Time Calculation**** A production line has 3 workstations with the following durations: PosteTime (seconds)A60B90C120 Calculate the Takt time if the customer demand is... ****Takt Time****: The available production time per day is 8 hours, and there are 3600 seconds in an hour. To calculate the Takt Time, we divide the available time by the daily output: 28,800 seconds / 300 pieces = 96 seconds per piece. Since C-post (120 seconds) is too slow, it needs to be adjusted. ****Added Value Analysis****: Identify tasks that create value. ****Capacity Calculation****: Calculate the number of machines needed. ****5S Method****: Apply optimal organization. ****Demand and Forecast Study****: Analyze customer demand. ****Key Performance Indicators (KPI)****: Measure production performance. ****Cost of Quality (COQ)****: Evaluate the impact of defects on costs. ****Inventory Management****: Calculate the safety stock. ****MRP Planning (Material Requirements Planning)****: Plan for material needs. ****Comparison of Production Systems****: Compare pull and push systems. ****Ishikawa Diagram****: Identify causes of production problems. ****Production Strategy and Competitiveness****: Evaluate strategies for competitiveness. ****Return on Investment (ROI) Calculation****: Calculate the ROI of a new equipment investment. The text also covers various aspects of production management, including planning, optimizing flows, managing inventory, and measuring performance. Each element is associated with one of five factors: Work, Capital, Raw Materials, Technology, or Machines. Additionally, there are exercises related to: 1. Production in different industries (mass production, demand-based production, continuous production, artisanal production). 2. Calculating the efficiency of a machine that operates for 10 hours per day but loses time due to setup and breakdown. 3. Creating a Gantt chart to schedule three operations: A, B, and C, each with a different duration. These exercises are designed to help readers develop skills in production management, including planning, optimizing flows, managing inventory, and measuring performance. **Production Management Essentials** ****Cost Per Unit**** €10,000 ÷ 1,000 = €10 per unit ****Advantages**** * Reduced inventory * Lower storage costs * Increased flexibility ****Disadvantages**** * Strong reliance on suppliers * Risk of stockout * Requires rigorous planning ****Formulas**** * Takt Time = Available Production Time ÷ Customer Demand * Capacity of Production = (Number of Machines × Working Hours) ÷ Unit Production Time ****Corrections**** * Stock Minimum: 200 units * Stock of Security: 50 units * Stock Maximum: 500 units * Production Capacity: 300 units per day ****Quality Control**** * Seiri (Sort): Identify and separate defective products * Seiton (Set in Order): Optimize production processes * Seiso (Clean): Maintain a clean and organized workspace * Seiketsu (Standardize): Standardize processes and procedures * Shitsuke (Do): Respect and follow established standards ****Demand Forecasting**** * Predicted Demand = Weighted Average of Previous Sales ÷ ****Root Causes of Defects**** * Labor, Materials, Machines, Methods, Environment ****Production Strategies**** * Push: Produce based on predictions * Pull: Produce to meet demand ****Cost of Quality (COQ)**** * Prevention: €5,000 * Inspection: €3,000 * Internal Failures: €2,000 * External Failures: €1,000 * Total COQ: €11,000 ****Net Needs**** * Net Needs = Gross Needs - Existing Stock ****Make to Order Strategy**** * Personalize production for each customer ****Quality Improvement Tools**** * Automation * Training * Eliminating Waste ****Production Management Methods**** * DMAIC (Define, Measure, Analyze, Improve, Control) * SMED (Single Minute Exchange of Die) * KPIs for Production * Logistics Improvement * Time Loss Reduction **Return on Investment (ROI) Calculation for New Equipment** * Cost Reduction Methods * Total Productive Maintenance (TPM) * ERP-Driven Production Management * Automation and Robotics * Capacity Analysis and Bottleneck Identification * Digitalization of Production Processes This series of exercises provides a comprehensive overview of production management, optimizing flows, and strategies for continuous improvement **📌** Detailed, allowing for immediate application in an industrial setting. References to Lean methods, Six Sigma, JIT, and TPM are relevant and adapted to the needs of modern businesses. Key Performance Indicators (KPIs): Highlighting performance indicators like TFS, MTBF, MTTR, OEE, and non-conformity rate is a plus. These KPIs are essential for production monitoring and identifying areas for improvement. Strategies for continuous improvement: Integrating strategies like automation, preventive maintenance, digitalization, and ongoing training reflects an in-depth understanding of the current challenges faced by industrial production. Visual elements and illustrations: The inclusion of colors, diagrams, and practical examples makes the document more engaging and enjoyable to read. Case studies: Adding a detailed case study illustrating the application of a specific method (e.g., successful implementation of Lean Manufacturing in an enterprise) could further enrich the document. Explanatory diagrams: Although concepts are well-explained, adding visual aids (e.g., Gantt charts for scheduling, Ishikawa diagrams for problem analysis, production flowcharts in Lean Manufacturing) would make the document even more accessible. Focus on emerging trends: A dedicated section on Industry 4.0 technologies like AI, advanced robotics, IoT, and digital twins would be a plus for anticipating the future of production.

Mrp gestion de production exercice. Mrp exercice corrigé.