# Solutions cost accounting chapter assignment

Business

Demand, ordering costs, carrying costs, and the purchase-order lead time are certain. Purchasing cost per unit is unaffected by the quantity ordered. No cookouts occur. Costs of quality and shrinkage costs are considered only to the extent that these costs affect ordering costs or carrying costs. 20-4 Costs included in the camping costs of inventory are incremental costs for such items as insurance, rent, obsolescence, spoilage, and breakage plus the opportunity cost of capital (or required return on investment). 0-5 Examples of opportunity costs relevant to the EX. decision model but typically not recorded in accounting systems are the following: 1. The return forgone by investing capital in inventory; 2. Lost contribution margin on existing sales when a Stockpot occurs; ND 3. Lost contribution margin on potential future sales that will not be made to disgruntled customers. 20-6 The steps in computing the costs of a prediction error when using the EX. decision model are: Step 1: Compute the monetary outcome from the best action that could be taken, given the actual amount Of the cost input.

Step 2: Compute the monetary outcome from the best action based on the incorrect amount Of the predicted cost input. Step 3: Compute the difference between the monetary outcomes from Steps 1 and 2. 20-1 20-7 Goal congruence issues arise when there is an inconsistency between the EX. decision model and the model used for evaluating the performance of the person implementing the model.

For example, if opportunity costs are ignored in performance evaluation, the manager may be induced to purchase in a quantity larger than the EX. model indicates is optimal, 20-8 just-in-time 01 T) purchasing is the purchase to materials (or goods) so that they are delivered just as needed for production

(or sales), Benefits include lower inventory holdings (reduced warehouse space required and less money tied up in inventory) and less risk of inventory obsolescence and spoilage 20-9 Factors causing reductions in the cost o place purchase orders of materials are: 0 Companies are establishing long- run purchasing agreements that define price and quality terms over an extended period. D Companies are using electronic links, such as the Internet, to place purchase orders. D Companies are increasing the use Of purchase-order cards. 20-10 Disagree. Choosing the supplier Who Offers the lowest price Will not necessarily result in the lowest total purchase cost to the buyer. This is because the price or purchase cost Of the goods is only one-?? and perhaps, most Obvious element of cost associated with purchasing and managing inventories.

Other elevate cost items are ordering costs, carrying costs, Stockpot costs, quality costs, and shrinkage costs. A low-cost supplier may well impose conditions on the buyer-?? such as poor quality, or frequent cookouts, or excessively high inventories-?? that result in high total costs of purchase, Buyers must examine all the elements of costs relevant to inventory management, not just the purchase price. 20-11 Supply-chain analysis describes the flow of goods, services, and information from the initial sources of materials and services to the delivery of products to consumers, regardless of whether those activities occur in the name company or in other companies.

Sharing of information across companies enables a reduction in inventory levels at all stages, fewer cookouts at the retail level, reduced manufacture of product not subsequently demanded by retailers, and a reduction in

expedited manufacturing orders, 20-12 Just-in-time (JUJU production is a -?? demand-pull manufacturing system that has the following features: TTL Organize production in manufacturing cells, Hire and retain workers who are multi-skilled, C Aggressively pursue total quality management (TTS) to eliminate defects, I] Place emphasis on reducing both setup time and manufacturing cycle time, and ҍ Carefully select suppliers who are capable of delivering quality materials in a timely manner _ 20-13 Traditional normal and standard costing systems use sequential tracking, in which journal entries are recorded in the same order as actual purchases and progress in production, typically at four different trigger points in the process.

Backslash costing omits recording some of the journal entries relating to the cycle from purchase of direct materials to sale of finished goods, i. E. , it has fewer trigger points at which journal entries are made. When journal entries for one or more stages in the cycle are omitted, 20-2 the journal entries for a subsequent stage use normal or standard costs to work backward to -?? flush outlet the costs in the cycle for which journal entries were not made. 20-14 Versions of backslash costing differ in the number and placement to trigger points at which journal entries are made in the accounting system: Number of Journal Entry Trigger points 3 Version I Location in Cycle Where Journal Entries Made Stage A.

Purchase of direct materials and incurring of conversion costs Stage C. Completion of good finished units of product Stage D. Sale of finished goods Stage A Purchase of direct materials and incurring of conversion costs Stage D. Sale of finished goods Stage C Completion of good finished units of product Stage D. Sale of finished goods Version 2 Version 3 20-15 Traditional

accounting systems cost individual products, and separate product costs from selling, general, and administrative costs, Lean accounting costs the entire value stream instead of individual products. Rework costs, unused capacity costs, and common costs that cannot be reasonably assigned to value streams are excluded from value stream costs.

In addition, many lean counting systems expense material costs the period they are purchased, rather than storing them on the balance sheet until the products using the material are sold. 20-16 (20 min,) Economic order quantity for retailer. L. D = 10, 000 jerseys per year, P = $200, C = $7 per jersey per year EX. C 2 DIP C C 2 0 10 , OHO O $200 = 75593 756 jerseys 7 Number Of orders per year = D 10, 000 13. 221] 14 orders EX. 756 Demand each working day Purchase lead time Reorder point D 10, 000 27. 40 jerseys per day Number of working days 365 = 7 days = 27. 4007 = 191. 80 0 192 jerseys 20-3 20-17 (20 min,) Economic order quantity, effect of parameter changes continuation of 20-16). 1. D = 10, 000 jerseys per year, P = $30, C = $7 per jersey per year EX. Ill 2 DIP C 10 , OHO $30 292. 7 jerseys [1 293 jerseys 7 The sizable reduction in ordering cost (from 5200 to $30 per purchase order) has reduced the EX. from 756 to 293. 2. The AT proposal has both upsides and downsides. The upside is potentially higher sales. FEB. customers may purchase more online than it they have to physically visit a store. FEB. would also have lower administrative costs and lower inventory holding costs with the proposal. The downside is that AT could capture Fib's customers. Repeat customers to the AT be site need not be classified as BP customers. Would have to establish enforceable rules to make sure it captures ongoing revenues from customers it directs to the AP web site.

There is insufficient information to determine Whether FEB. should accept TATS proposal.

Much depends on whether FEB. views AT as a credible, -?? honest" partner. 20-18 (15 min. ) EX. for a retailer. 1. D – 26, awards per year, P – $165, C- $9 = $1. 80 per yard per year EX. O 2 0 26, 400 C SASS 2 DIP 0 2, 200 yards C D 26, 400 C 0 12 orders per year EX. 2, 200 Number of orders per year: Demand each working day = 105. 60 yards per day = 528 yards per week (105. 0 x 5 = Error! 26, 400 = 250 days per week) Purchasing lead time = 2 weeks Reorder point = 528 yards per week [1 2 weeks = 1 , 056 yards 20-13 (20 min. ) EX. for manufacturer. 1. Relevant carrying costs per part per year: Required annual return on investment 15% [l $60 Relevant insurance, materials handling, breakage, etc. Sots per year Relevant carrying costs per part per year $96$15 With D – 18, 000 parts per year; P – $150: C – $15 per part per year, EX. for manufacturer is: EDP 2 18, 000 EX.= C 600 units C $15 2. Relevant annual = [ID [l Q [l ordering costs [l D 18 , OHO C] ISIS D = 600 $4, 500 where Q = 600 units, the EX.. 3. At the EX., total relevant ordering costs and total relevant carrying costs will be exactly equal Therefore, total relevant carrying costs at the EX. = $4, 500 (from requirement 2). We can also confirm this with a direct calculation: Q C Relevant annual carrying costs [12 [l 600 ASS where Q = 600 units, the EX. 4 Purchase order lead time is half a month. Monthly demand is 18, 000 units * 12 months = 1, 500 units per month.

Demand in half a month is Error! ; 1, 500 units or 750 units. Alkaline should reorder when the inventory Of rotor blades falls to 750 units. 25 0-20 (20 min. ) Sensitivity Of EX. to changes in relevant ordering and carrying costs.

1. A straightforward approach to the requirement is to construct the following table for EX. at relevant carrying and ordering costs. Annual demand is 10, 000 units. The formula for the EX. model is: EDP DIP ICQ EX. = and for Relevant Total Costs (ROTC) C C Q 2 where D – demand in units per year P – relevant ordering costs per purchase order C = relevant carrying costs of one unit in stock for the time period used for D (one year in this problem.

Relevant ordering costs per Purchase order (P) $400 $100 EX. = 2 010, 000 0 $400 0, 000 C $400 895 C D 895, ROTC-D $8, 944 $10 8952 Relevant Carrying Costs per Jinni per Year (C) $10 $20 $40 EX. = EX. – 2 fill, oho 5200 10, 000 $200 $47 $20 447, ROTC= 58, 944 520447 2 2 fill, oho o $100 10, 000 c $100 224 0 $40 0 224, ROTC= o o $8, 944 $40 2242 2. For a given demand level, as relevant carrying costs increase and relevant ordering costs decrease, EX. becomes smaller. The change in EX. results in relevant total costs (ROTC) being the same across all three cases. That is, the EX. Offsets the effect on total costs Of the increase in carrying costs and the decrease in ordering costs. 3.

If Alpha estimates C = SIS per unit per year and P = $400 per order, then from requirement 1, EX. 224 units and Relevant Total Cost (ROTC) $8, 944 For EX. = 224 units, C = $20 per unit per year and P = $200 per order, DIP ICQ Relevant total costs (ROTC) -Q 2 10, OHO O $200 2240 $20 224 2 – $8, 929 $2, 240 = $11, 169 The prediction error equals SSI, 169 – $8, 944 = SO, 225 which is ($2, 225 ; $8, 944) of the relevant total cost had there been no prediction error. The error in prediction results is a significantly higher cost but is still limited, given that the estimate to the carrying cost was halt the

actual amount and the estimate to the ordering cost was twice the actual amount. The square root function dampens the effect of the errors. 20-6 20-21 (15 min. ) Inventory management and the balanced scorecard.

I _ The incremental increase in operating profits from employee cross-training (ignoring the cost of the training) is: Increased revenue from higher customer satisfaction ($5, COO, OHO x 2% x 5) $500, 000 Reduced inventory-related costs 100, 000 Incremental increase in operating profits (ignoring training costs) 5600. 000 2. At a cost Of $600, 000, DOCS will be indifferent between current expenditures and increasing employee cross-training by 5%. Consequently, the most DOCS would be Willing to pay for this cross-training is the $600, 000 benefit received. 3. Besides increasing short-term operating profits, additional employee cross-training can improve employee satisfaction because their jobs can have more variety, potentially leading to unanticipated productivity improvements and lower employee turnover. Multi. Skilled employees can also understand the production process better and can suggest potential improvements.