**INVENTORY VALUATION (REF: IAS 2: INVENTORIES)**

Inventory refers to current assets, tangible in nature that are or that will become part of the product to be sold by the enterprise. They are current assets held for resale or for use as inputs in the production of goods. Inventory is usually split into various categories as follows:

Raw materials; Materials purchased for use in manufacturing products.

Work in process; partially completed units in production.

Finished goods; manufactured products ready for sale.

**COUNTING INVENTORY**

Before we can value inventory, it is important to know how much there is. It is also important to know what type of inventory there are. This can be done via:

1. Periodic counts

This is normally referred to as stock taking, and is usually done at the end of the year or some other predetermined interval. Staff usually physically counts all items of inventory in the premises. Auditors will advice on the procedures, attend the count, and verify that the counting is right by sampling a few items.

1. Perpetual inventory

Under this system, a record is kept item by item of all inventory movements as they occur. Therefore, a figure for the amount at hand is known at any point in time. Information technology has made this system easy and popular. With a perpetual system, inventory records are updated whenever a purchase or a sale is made. In this way, the inventory records at any given time reflect how many of each inventory item should be in the warehouse or out on the store shelves. A perpetual system is most often used when each individual inventory item has a relatively high value or when there are large costs to running out of or overstocking specific items.

**Example**

**ABC LTD conducted the following transactions in the month of January 2011.**

**1 Purchased inventory worth Ksh. 120,000.00 in cash**

**2 Sold goods worth Ksh. 100,000.00 on account. These costs were purchased at a cost of Ksh. 70,000.00.**

**3. Sold in cash goods that had originally cost Ksh. 30,000.00 for Ksh. 50,000.00.**

**REQUIRED**

**Journal entries and ledger entries for the transactions using:**

* **The periodic inventory system.**
* **The Perpetual Inventory System.**

**Solution**

Under the periodic inventory system the entries will be:

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Description | DR | CR |
| 1 | DR: Inventory | 120,000.00 |  |
|  | CR: Cash |  | 120,000.000 |
|  | (Being purchase of inventory in cash) | | |
|  |  |  |  |
| 2 | Accounts receivable | 100,000.00 |  |
|  | Sales |  | 100,000.00 |
|  | (Being sales of goods on credit) | | |
|  |  |  |  |
| 3 | Cash | 50,000.00 |  |
|  | Sales |  | 50,000.00 |

Note that we are not making entries to adjust for the sold inventory. It is at the end of the year that stock is taken and used to determine the cost of goods sold using the famous formula.

Opening stock

Add Purchases

Less closing stock (Established via the stock take)

Cost of goods sold

Post the transactions in ledger accounts assuming zero opening balances for all accounts.

Using the perpetual inventory system we journalize as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Description | DR | CR |
| 1 | DR: Inventory | 120,000.00 |  |
|  | CR: Cash |  | 120,000.000 |
|  | (Being purchase of inventory in cash) | | |
|  |  |  |  |
| 2 | Accounts receivable | 100,000.00 |  |
|  | Sales |  | 100,000.00 |
|  | (Being sales of goods on credit) | | |
|  |  |  |  |
|  | Cost of Goods Sold | 70,000.00 |  |
|  | Inventory |  | 70,000.00 |
|  | (Recognition of reduction in inventory after sales of Ksh. 100,000) | | |
|  |  |  |  |
| 3 | Cash | 50,000.00 |  |
|  | Sales |  | 50,000.00 |
|  | (Being cash sale of goods) | | |
|  |  |  |  |
|  | Cost of Goods Sold | 30,000.00 |  |
|  | Inventory |  | 30,000.00 |
|  | (Recognition of reduction in inventory after sales of Ksh. 50,000) | | |

Note the highlighted entry made after every sale to record a reduction in inventory. Accounts like sales returns and purchases returns do not appear under this system since we are dealing directly with inventory account, debiting it when we receive inventory and crediting it when we sell or return inventory to supplier. Post the transactions into ledger accounts assuming zero beginning balances (refer to other journal entries at end of the notes).

**VALUING INVENTORY AT HISTORICAL COST**

Once the amount (quantity) of inventory is established, the key problem is to establish the cost item at each stage of the production process, how to determine the cost of items sold and hence the cost of items not yet sold. The biggest problem is the allocation of overheads. Note that only those overheads that are specifically attributable to the production of the goods should be included in the cost. The cost of the items in inventory include the direct costs (Raw materials, labour...) and the indirect costs (Shipping, modifications, ...) incurred to bring the items to their present location and condition.

*Example 1*

Consider the following example of overhead absorption for an item manufactured.

Direct cost: Labour Ksh. 3 per unit

: Materials Ksh. 2 per unit

Direct manufacturing overheads (Specific supervisors, machines) Ksh. 40,000.00

Indirect manufacturing overheads (rates, Factory managers...) Ksh. 60,000.00

Administrative overheads for rest of company Ksh. 80,000.00

Selling overheads Ksh. 20,000.00

Production for the year was 20,000 units and this type of production used one third of the factory.

Solution

NB: General administrative overheads are not included in the cost of inventory. By general we are referring to those overheads that cannot be specifically associated with or apportioned to the cost of the inventory. You will cover overhead apportionment in greater detail in management accounting.

Direct cost Ksh.5.00

Direct manufacturing overheads Ksh.2.00

Indirect manufacturing overheads Ksh.1.00 (60,000x1/3)/20,000

**Ksh. 8.00 per unit**

Note that we have not included the administrative overheads for the rest of the company and selling costs because we have no way of apportioning these to the units produced. These are general administrative overheads that must be excluded from the cost of the units produced. Please refer to text books in management accounting on overheads absorption (e.g. Drury Collins, cost and management accounting).

**INVENTORY FLOW**

The flow of inventory can be tracked using any of the three methods or **cost formulas** below.

* First in First Out (FIFO) Method.
* Last In First Out (LIFO) Method.
* The weighted Average Method.

Example

The following purchases and sales were made by a company.

January: Purchased 10 units of stock at Ksh. 25 each.

February: Purchased 15 units of stock at Ksh. 30 each.

March: Sold 15 units of stock.

April: Purchased 20 units of stock at Ksh. 35 each.

May: Sold 18 units of inventory.

Required:

The value of inventory using a) FIFO b) LIFO c) Weighted average methods.

Solution

Using FIFO

|  |  |  |  |
| --- | --- | --- | --- |
| MONTH | INVENTORY QUANTITY | VALUE (Ksh) | COST OF SALES |
| January | +10 at Ksh. 25 each | 250.00 |  |
| February | +15 at Ksh. 30 each | 450.00 |  |
| End of February total | +25 | 700.00 |  |
| March | -10 at Ksh. 25 (Jan) | (250.00) |  |
|  | -5 at Ksh. 30 (Feb) | (150.00) | 400.00 |
| End of March Total | +10 | 300.00 |  |
| April | +20 at Ksh. 35 each | 700.00 |  |
| End of April Total | +30 | 1000.00 |  |
| May | -10 at Ksh. 30 (Feb.) | (300.00) |  |
|  | -8 at Ksh. 35 (March) | (280.00) | 580.00 |
| End of May Total | +12 at Ksh. 35 | 420.00 | 980.00 |

Using LIFO

|  |  |  |  |
| --- | --- | --- | --- |
| MONTH | INVENTORY QUANTITY | VALUE (Ksh) | COST OF SALES |
| January | +10 at Ksh. 25 each | 250.00 |  |
| February | +15 at Ksh. 30 each | 450.00 |  |
| End of February total | +25 | 700.00 |  |
| March | -15 at Ksh. 30 (Feb.) | (450.00) | 450.00 |
| End of March Total | +10 | 250.00 |  |
| April | +20 at Ksh. 35 each | 700.00 |  |
| End of April Total | +30 | 950.00 |  |
| May | -18 at Ksh. 35 (April) | (630.00) | 630.00 |
| End of May Total | 2 at Ksh. 35 and 10 at Ksh. 25 |  |  |
|  | 320.00 | 1080.00 |

Using the weighted average method

|  |  |  |  |
| --- | --- | --- | --- |
| MONTH | INVENTORY QUANTITY | VALUE (Ksh) | COST OF SALES |
| January | +10 at Ksh. 25 each | 250.00 |  |
| February | +15 at Ksh. 30 each | 450.00 |  |
| End of February total | +25 at 28 (Average) | 700.00 |  |
| March | -15 at Ksh. 28 (Avg) | (420.00) | 420.00 |
| End of March Total | +10 | 280.00 |  |
| April | +20 at Ksh. 35 each | 700.00 |  |
| End of April Total | +30 | 980.00 |  |
| May | -18 at Ksh. 32.667(Avg) | (588.00) | 588.00 |
| End of May Total | 12 at Ksh. 32.667 (Avg) | 392.00 | 1008.00 |

FIFO method tends to have the latest historical costs and is the preferred method of tracking inventory. The weighted average method is also recommended. LIFO method tends to use old costs and can seriously understate the cost of inventory especially under periods of high inflation. The attractiveness of LIFO can be explained with one word TAXES.

If a company uses LIFO in a time of rising prices, reported cost of goods sold is higher, reported taxable income is lower, and cash paid for income taxes is lower. In fact, LIFO was invented in the 1930s in the United States for the sole purpose of allowing companies to lower their income tax payments. IAS 2 Prohibits LIFO.

The FIFO formula assumes that the items of inventory that were purchased or produced first are sold first, and consequently the items remaining in inventory at the end of the period are those most recently purchased or produced. Under the weighted average cost formula, the cost of each item is determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased or produced during the period. The average may be calculated on a periodic basis, or as each additional shipment is received, depending upon the circumstances of the entity.

**INVENTORY VALUATION PRACTICE**

PRINCIPLE: Inventory is valued at the LOWER of cost and net realizable value. This means that to value inventory, you start by determining two figures.

* Cost.
* Net realizable value.

You then compare and take the lower of the two figures.

We have already leant how to cost inventory, but we summarize them below again.

*Cost of inventory*

The cost of inventories shall comprise all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition.

The costs of purchase of inventories comprise the purchase price, import duties and other taxes (other than those subsequently recoverable by the entity from the taxing authorities), and transport, handling and other costs directly attributable to the acquisition of finished goods, materials and services. Trade discounts, rebates and other similar items are deducted in determining the costs of purchase.

The costs of conversion of inventories include costs directly related to the units of production, such as direct labour. They also include a systematic allocation of fixed and variable production overheads that are incurred in converting materials into finished goods. Fixed production overheads are those indirect costs of production that remain relatively constant regardless of the volume of production, such as depreciation and maintenance of factory buildings and equipment, and the cost of factory management and administration. Variable production overheads are those indirect costs of production that vary directly, or nearly directly, with the volume of production, such as indirect materials and indirect labour. General administrative overheads not allocated are excluded from the cost of inventory.

Other costs are included in the cost of inventories only to the extent that they are incurred in bringing the inventories to their present location and condition. For example, it may be appropriate to include non-production overheads or the costs of designing products for specific customers in the cost of inventories. Examples of costs excluded from the cost of inventories and recognised as expenses in the period in which they are incurred are:

(a) Abnormal amounts of wasted materials, labour or other production costs;

(b) Storage costs, unless those costs are necessary in the production process before a further production stage;

(c) Administrative overheads not contributing to bringing inventories to their present location and condition; and

(d) Selling costs.

IAS 23 Borrowing Costs identifies limited circumstances where borrowing costs (interest expenses) are included in the cost of inventories. Note that generally, interest expenses are not included as part of cost.

*Net realizable value:*

This is the carrying amount of inventories carried at fair value less costs to sell (Net realizable value);The cost of inventories may not be recoverable if those inventories are damaged, if they have become wholly or partially obsolete, or if their selling prices have declined. The cost of inventories may also not be recoverable if the estimated costs of completion or the estimated costs to be incurred to make the sale have increased. The practice of writing inventories down below cost to net realisable value is consistent with the view that assets should not be carried in excess of amounts expected to be realised from their sale or use.

Inventories are usually written down to net realisable value item by item. In some circumstances, however, it may be appropriate to group similar or related items. This may be the case with items of inventory relating to the same product line that have similar purposes or end uses, are produced and marketed in the same geographical area, and cannot be practicably evaluated separately from other items in that product line. It is not appropriate to write inventories down on the basis of a classification of inventory, for example, finished goods, or all the inventories in a particular operating segment. Service providers generally accumulate costs in respect of each service for which a separate selling price is charged. Therefore, each such service is treated as a separate item. Estimates of net realisable value are based on the most reliable evidence available at the time the estimates are made, of the amount the inventories are expected to realise. These estimates take into consideration fluctuations of price or cost directly relating to events occurring after the end of the period to the extent that such events confirm conditions existing at the end of the period.

***Materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated is expected to be sold at or above cost***. However, when a decline in the price of materials indicates that the cost of the finished products exceeds net realisable value, the materials are written down to net realisable value. In such circumstances, the replacement cost of the materials may be the best available measure of their net realisable value. A new assessment is made of net realisable value in each subsequent period. When the circumstances that previously caused inventories to be written down below cost no longer exist or when there is clear evidence of an increase in net realisable value because of changed economic circumstances, the amount of the write-down is reversed (i.e. the reversal is limited to the amount of the original write-down) so that the new carrying amount is the lower of the cost and the revised net realisable value. This occurs, for example, when an item of inventory that is carried at net realisable value, because its selling price has declined, is still on hand in a subsequent period and its selling price has increased.

*Recognition as an expense*

When inventories are sold, the carrying amount of those inventories shall be recognised as an expense in the period in which the related revenue is recognised. The amount of any write-down of inventories to net realisable value and all losses of inventories shall be recognised as an expense in the period the write-down or loss occurs. The amount of any reversal of any write-down of inventories, arising from an increase in net realisable value, shall be recognised as a reduction in the amount of inventories recognised as an expense in the period in which the reversal occurs. Some inventories may be allocated to other asset accounts, for example, inventory used as a component of self-constructed property, plant or equipment. Inventories allocated to another asset in this way are recognised as an expense during the useful life of that asset.

*Disclosure*

The financial statements shall disclose:

(a) The accounting policies adopted in measuring inventories, including the cost formula used;

(b) The total carrying amount of inventories.

(c) The carrying amount of inventories carried at fair value less costs to sell (Net realizable value);

(d) The amount of inventories recognised as an expense during the period;

(e) The amount of any write-down of inventories recognised as an expense in the period.

(f) The amount of any reversal of any write-down that is recognised as a reduction in the amount of inventories recognised as expense in the period

(g) The circumstances or events that led to the reversal of a write-down of inventories in accordance

(h) The carrying amount of inventories pledged as security for liabilities.

*Cost of inventories of a service provider*

To the extent that service providers have inventories, they measure them at the costs of their production. These costs consist primarily of the labour and other costs of personnel directly engaged in providing the service, including supervisory personnel, and attributable overheads. Labour and other costs relating to sales and general administrative personnel are not included but are recognised as expenses in the period in which they are incurred. The cost of inventories of a service provider does not include profit margins or non-attributable overheads that are often factored into prices charged by service providers.

*Cost of agricultural produce harvested from biological assets*

In accordance with IAS 41 Agriculture inventories comprising agricultural produce that an entity has harvested from its biological assets are measured on initial recognition at their fair value less costs to sell at the point of harvest. This is the cost of the inventories at that date for application of this Standard.

**Exercises**

1. A firm has the following items of stock on its inventory.

|  |  |  |  |
| --- | --- | --- | --- |
| Product | Cost (Ksh.) | NRV (Ksh) |  |
| A | 10 | 6 |  |
| B | 11 | 15 |  |
| C | 12 | 9 |  |

**Required:**

Compute the value of the inventory in stock, and the write down to be included in the statement of comprehensive incomes (Income statement).

1. The table below shows the inventory items and their costs.

|  |  |  |  |
| --- | --- | --- | --- |
| Inventory | Quantity | Cost (Ksh) | Market Value (Ksh.) |
| **Category 1** |  |  |  |
| Item A | 200 | 1.00 | 0.50 |
| Item B | 100 | 2.00 | 2.10 |
| Item C | 100 | 3.00 | 2.50 |
| **Category 2** |  |  |  |
| Item D | 300 | 2.50 | 2.00 |
| Item E | 200 | 3.00 | 3.10 |

Required:

Compute the amount of inventory to be included in the statement of financial position, and the amount of write down to be recognised in the statement of comprehensive incomes.

1. ABC LTD sells musical instruments, specifically Violins. Her transactions for the year are as follows.

|  |  |  |
| --- | --- | --- |
| Date | Buy | Sell |
| January 1 | 2 at Ksh. 400 each |  |
| March 31 |  | 1 at Ksh. 600 each |
| April 30 | 1 at Ksh. 350 each |  |
| June 30 |  | 1 at Ksh. 600 each |
| July 31 | 2 at Ksh. 300 each |  |
| September 30 |  | 3 at Ksh. 500 each |
| November 30 | 1 at Ksh. 250 each |  |

Required:

1. Prepare statements showing the value of inventory as at November 30 using;

* FIFO.
* LIFO.
* Weighted average method for each.

1. The gross profit for the period using figures generated by each of the formulas.
2. A company manufactures products A, B, and C. As at 31 December 2010, the following inventory was in stock. All the three products use the same raw material X.

|  |  |  |
| --- | --- | --- |
| Product | Finished units | Work in progress |
| A | 1000 | 500 |
| B | 2500 | 100 |
| C | 6000 | 4000 |

30,000 units of the raw material X were in stock that cost Ksh. 900,000. The expected market value of the raw materials less costs to sell is Ksh. 800,000 but will incur selling costs of Ksh. 50,000.

The selling prices for each of the products A, B, and C are Ksh. 50, 25, and 20 respectively net of the selling price.

The costs (Ksh.) per unit of manufacturing the products are as follows.

|  |  |  |  |
| --- | --- | --- | --- |
|  | A | B | C |
| Raw materials | 10 | 5 | 4 |
| Labour | 3 | 2 | 1 |
| Direct manufacturing overheads | 6 | 5 | 5 |
|  |  |  |  |
| General Overheads (Total) | 50,000 |  |  |

The degree of completion of the work in progress is as follows.

|  |  |  |  |
| --- | --- | --- | --- |
|  | A | B | C |
| Raw materials | 60% | 70% | 50% |
| Labour | 70% | 80% | 84% |
| Direct manufacturing overheads | 10% | 15% | 20% |

The estimated fair value of the finished goods less costs to sell is as follows:

|  |  |
| --- | --- |
| Product | Fair value less costs to sell per unit |
| A | 30 |
| B | 15 |
| C | 18 |

REQUIRED

The value of the raw materials, WIP and Finished units to be included in the statement of financial position (Balance sheet).

1. Lehi Wholesale Distributors buys printers from manufacturers and sells them to office supply stores. During January 2010, its periodic inventory records showed the following:

Jan. 1 Beginning inventory consisted of 26 printers at $200 each.

10 Purchased 10 printers at $220 each.

15 Purchased 20 printers at $250 each.

28 Purchased 9 printers at $270 each.

31 Sold 37 printers.

Calculate ending inventory and cost of goods sold, using:1. FIFO inventory.2. LIFO inventory.3. Average cost.

6. What types of inventory does a manufacturing firm have?

7. What comprises the cost of inventory?

8. Why is it more difficult to account for the inventory of a manufacturing firm than for a merchandising firm?

9. When is the cost of inventory transferred from an asset to an expense?

11. Which inventory method (perpetual or periodic) provides better control over a firm s inventory?

12. Explain how purchase discounts/ purchase returns are treated with perpetual/periodic inventory methods.

13. **PERPETUAL INVENTORY METHOD**

Oakwood Furniture purchases and sells dining room furniture. Its management uses the perpetual method of inventory accounting. Journalize and post the following transactions that occurred during April 2003:

Apr. 2 Purchased on account Ksh. 15,000 of inventory with payment terms 2/10 net 30, and paid Ksh.250 in cash to have it shipped from the vendor s warehouse to the Oakwood showroom.

5 Sold inventory costing Ksh. 3,000 for Ksh. 5,400 on account/credit.

10 Paid Ksh. 6,860 on account (from April 2 purchase).

14 Returned two damaged tables purchased on April 2 (costing Ksh. 800 each) to the vendor.

19 Received payment of Ksh. 1,000 from customers.

20 Paid the balance of the account from April 2 purchases.

22 Sold inventory costing Ksh. 6,000 for Ksh. 7,000 on account.

26 A customer returned a dining room set that she decided didn’t t match her home. She paid Ksh. 2,500 for it, and its cost to Oakwood was Ksh. 1,500.

Assuming the balance in the inventory account is Ksh. 8,000 on April 1, and no other transactions relating to inventory occurred during the month, what is the inventory balance at the end of April?

14. Discuss with examples the following ratios used to estimate the level of inventory.

* Inventory turnover.
* Number of Days Sales in Inventory.

**APPENDIX: SUMMARY OF JOURNAL ENTRIES FOR INVENTORY**

|  |  |
| --- | --- |
| **PERPETUAL INVENTORY** | **PERIODIC INVENTORY** |
| **Purchase of inventory in cash/ credit** | |
| DR: Inventory | DR: Inventory |
| CR: Bank/ Cash or accounts payable/ creditors | CR: Bank/ Cash or accounts payable/ creditors |
| **Transportation costs** |  |
| DR: Inventory | DR: Freight in |
| CR: Cash | CR: Cash |
| **(Note that transport costs of inventory form part of the cost of inventory (To bring it to present LOCATION). Under the perpetual system, such transport costs are recognised directly as part of inventory by directly debiting the inventory account. Under the periodic system, an account called freight in where transport costs are entered.** | |
|  |  |
| **Purchase returns** |  |
| DR: Cash or accounts payable | DR: Cash or accounts payable. |
| CR: Inventory | CR: Purchases returns. |
|  |  |
| **Purchase discounts** |  |
| DR: Accounts payable | DR: Accounts payable |
| CR: Inventory (with the discount) | CR: Discounts received |
| CR: Cash (with actual paid) | CR: Cash |
| **Cash discounts are given to encourage debtors to pay in time. In a perpetual system they serve to reduce the cost of inventory (and hence the credit to inventory account). In a periodic system, a separate account called discounts received is used to accumulate the discounts till the end of the year.** | |
|  |  |
| **Sales** |  |
| DR: Accounts receivable or cash | DR: Accounts receivable or cash |
| CR: Sales | CR: Sales |
| DR: Cost of sales |  |
| CR: Inventory |  |
|  |  |
| **Sales returns** |  |
| DR: Sales returns | DR: Sales returns |
| CR: Accounts receivable | CR: Accounts receivable |
| DR: Inventory |  |
| CR: Cost of goods sold |  |
| **Like sales, a sales return under perpetual inventory system has 2 entries.** | |
| **Note that due to the influence of IT, the perpetual method is very popular. If the question is silent, this method is preferable, though use of periodic system would still be right.** | |

**Assignment 1 (Continued)**

**PERPETUAL AND PERIODIC JOURNAL ENTRIES**

The following transactions for Goodmonth Tire Company occurred during the month of March 2010:

a. Purchased 500 automobile tires on account at a cost of Ksh.40 each for a total of Ksh.20,000.

b. Purchased 300 truck tires on account at a cost of Ksh.80 each for a total of Ksh.24,000.

c. Paid cash of Ksh.1,300 for separate shipping costs on the automobile tires purchased in (a) The supplier of the truck tires included the shipping costs in the Ksh.80 price.

d. Returned 12 automobile tires to the supplier because they were defective.

e. Paid for the automobile tires. A 1% discount was given on the amount owed. (HINT: Remember that some of the automobile tires were returned.) Payment terms were 1/20 net 30.

f. Paid for half the truck tires, receiving a discount of 2%. Terms were 2/10 net 30.

g. Paid the remaining balance owed on the truck tires. No discount was received because payment was made after the discount period.

h. Sold on account 400 automobile tires at a price of Ksh.90 each for a total of Ksh.36,000.

i. Sold on account 200 truck tires at a price of Ksh.150 each for a total of Ksh.30,000.

j. Accepted return of 7 automobile tires from dissatisfied customers.

1. Prepare journal entries and post the transactions in the ledgers to account for the above transactions assuming a periodic inventory system.

2. Prepare journal entries and post the transactions in the ledgers to account for the above transactions assuming a perpetual inventory system.

3. Assume that inventory levels at the beginning of March (before these transactions) were 100 automobile tires that cost Ksh.40 each and 70 truck tires that cost Ksh.80 each. Also, assume that a physical count of inventory at the end of March revealed that 184 automobile tires and 164 truck tires were on hand. Given these inventory amounts, prepare the closing entries to account for inventory and related accounts as of the end of March.