



ACCOUNTING GRADE 11

NOTES

COST ACCOUNTING (MANUFACTURING)

Direct labour: is the labour that is practically involved in the production process of the product. Direct labour is the amount of effort exerted by employees to convert raw material into finished goods.

Direct materials: are those materials that are consumed during the manufacturing process of the product and which are directly identified in the product. It is the material that are made into finished product. It is physically become the finished product at the end of the manufacturing process.

Indirect material: is the material that in the production process that cannot be traced in the finished product. This material while consumed as part of the production process, is usually used in small amount on a per-product basis. It cannot be conveniently identified and allocated to the cost unit.

Indirect labour :is the labour that supports the production process but which is not directly involved in the active conversion of materials into finished products.

The costs involved in manufacturing a product are divided into two groups:

1. Prime costs (**Direct costs**)
2. Manufacturing/Factory overheads (**Indirect Costs**)

Prime costs:

Refers to **total direct costs** involved in the manufacturing process.

Prime costs include the **direct material costs** and **direct labour costs**

FORMULA/IDENTITY

Prime Costs = Direct Material Costs + Direct Labour Costs

Total manufacturing costs:

Total manufacturing costs refers to the total costs incurred in manufacturing a product.

This can mathematically be expressed using the following identity (formula)

Total manufacturing costs = Prime Costs + Manufacturing Overheads

Total manufacturing costs is a summation of all fixed and variable costs incurred by a manufacturing concern in the production process of goods and services.

Alternatively, then:

Total manufacturing cost = fixed costs + variable costs

Unit cost:

The unit cost of a product is the cost per item / unit

FORMULA

Unit cost = $\frac{\text{Total Manufacturing Costs}}{\text{Number of units produced}}$

Break even point

A manufacturing concerns' breakeven point is the point at which its sales exactly cover its expenses. To compute a business's breakeven point in sales volume, you need to know the values of three variables:

- Fixed costs: Costs that are independent of sales volume, such as rent, insurance, etc.
- Variable costs: Costs that are dependent on sales volume, such as the cost of manufacturing the product
- Selling price of the product

NOTE:

Selling price per unit – variable cost per unit = **Contribution per unit**

How to Calculate Breakeven Point

FORMULA

$$\begin{aligned} \text{Break even point} &= \frac{\text{Total fixed costs}}{\text{contribution per unit}} \\ &= \frac{\text{Total fixed cost}}{\text{Selling price per unit} - \text{Variable cost per unit}} \end{aligned}$$

Internal Control Processes on Manufacturing Accounts

- ❑ Strict control should be kept on the factory floor to prevent theft of goods/raw material
- ❑ The employees should be trained on the production process and be supervised to prevent shoddy workmanship or waste of raw material
- ❑ Material bought should be of good quality and that will minimise waste in the manufacturing plant
- ❑ Control of raw material bought, goods in process and finished goods should follow a strict procedure
- ❑ The documents of different stages of material should be kept accurately, e.g. Raw material, work-in process etc.
- ❑ Internal audit of stock should be regularly conducted
- ❑ The correct tendering process should be followed to avoid nepotism and delivery of inferior material

Ethics related to Manufacturing Accounts and Corporate Governance

- ❑ Manufacturing companies should prioritise safety of employees at all times
- ❑ Fair remuneration packages should be offered to employees
- ❑ The manufacturing factory should dispose the waste material responsibly in a way that the community and environment will not be affected.
- ❑ Natural resources should not be depleted, companies should use raw material in a sustainable manner.
- ❑ Companies manufacturing goods should at all cost avoid the price fixing
- ❑ Manufacturing industries are encouraged to buy raw material obtainable from local industries if the quality is of good standard in order to improve local trade.

- ▢ The deliberate product shrinkage to gain higher profits, this could lead to legal action against the business
- ▢ The use of inferior material in order to gain higher profits

Cost effect of importing raw material

- Exchange rate fluctuations
- Import duties changing in future
- Time lags for imports & returns
- customers may be lost if they have to wait for a long period
- The quality of raw material may not meet the requirements of the business and that will affect productivity
- Possibility of job losses in local industries
- Support for local businesses / negative effect on the economy
- Transport costs may increase the cost price of goods

Types of problems normally encountered in the manufacturing business

Problem

- Increase in direct labour cost
- Increase in direct material cost

Advice

- Train the workers/ Skills development
- Increase supervision
- Control overtime/supervise normal time
- Set targets
- Look for cheaper materials or suppliers
- Buy in bulk
- Use local suppliers (closer)
- Control wastage of raw material



Useful Tips

When responding to problem solving questions, always quote and compare

The cost of raw material can increase as a result of the following factors:

- Due to the effects of inflation, price of raw materials increased.
- Storage costs.
- Increase in carriage/transport cost
- Increase in insurance of goods etc.
- Increase in exchange rates

- Increase in import duties

The cost of direct labour can increase as a result of the following factors:

- High staff turnover rate
- Old equipment that affects productivity
- Work hours lost due to training time (workers paid for training) / due to load-shedding (power-cuts) / due to paid sick leave
- Errors in calculation of wages (over-paid)
- Negotiated wage increase / applied minimum wage / inflation /
- Increased salary scales resulting from annual increment or based on for qualifications
- Paid bonuses to some workers
- Excessive or poor control of overtime
- Lack of productivity (inefficiency) of workers
- Inexperienced / poorly trained workers

MISCONCEPTIONS AND COMMON ERRORS

- ☐ The calculation of **Direct Material Cost** integrating the use of **weighted average method** to value stock used in the factory.
- ☐ Calculation of **Direct Labour Cost**.
- ☐ Inability to **distinguish between theft of stock** in the storeroom and **wastage of stock** in the factory.
- ☐ Lack of understanding the production process, different processes.

SUGGESTIONS FOR IMPROVEMENT

- Importance of **understanding the different components** of a manufacturing entity i.e. **storerooms, factory, administration and sales departments**.
- **Revision of Cost Accounting questions** to ensure that learners understand a variety of questioning techniques on this topic.
- Consider the **three essential aspects** when commenting on the break-even point, depending on the requirements of a question. Emphasise on the following:
 - compare **units produced to the break-even** point to assess if a profit is made.
 - compare the break-even point of **the current year to that of the previous year**, and
 - Compare the **units produced in** the current year to that of the previous year.
- Short formative tests on various calculations are advised e.g. material costs, labour costs and the splitting of costs across the different cost components (**fractions, ratios or percentages**)
- Refer to the **unit cost of production** and to **unit costs for materials, labour and factory overheads**.
- Expose learners to problem-solving questions whereby learners are **expected to engage with the figures to identify problems and offer valid explanations and solutions**.
- Use relevant and useful information to develop problem solving skills

INTERNAL CONTROL

Segregation/Division of duties

Dividing responsibility to

- create a system of checks and balances.
 - Assign different employees to approve receiving raw material, expenditures and paying the invoices.
 - This is to ensure that
 - assets are managed properly and
 - that the business meets quality, legal and ethical standards.
- For example
- a different person must test the finished good from the person who produced the good
 - This will ensure that the quality is met and the business applied objectivity principle

Proper authorization

Proper authorization for

- transactions,
- payments and
- pricing of its products
- ✓ This ensures the prevention of theft and fraud.
- ✓ For example, a supervisor or manager must approve expenses before payments are made for materials

Adequate documents and records

- Filing the correct documents
- Recording accurately
- This will ensure that the financial statements are accurate.

Adequate documents and records

- WHAT CONTROLS WILL ENSURE ADEQUATE RECORDKEEPING
- creation of invoices, receipts, cheques, debit notes, credit notes etc.
- that are easy to use and sufficiently informative;
- the use of pre-numbered, consecutive documents; and
- the timely preparation of documents.

Physical control

- Physical control over assets and records helps protect the business assets.
- These control activities may include
 - ✓ electronic or mechanical controls
E.g. safe, employee ID cards, fences, cash registers, fireproof files, and locks or
 - ✓ computer-related controls
E.g. scanners, bar coding etc.) dealing with access privileges or established backup and recovery procedures.

Independent checks

- Performed by an internal auditor or by another employee
- This helps to ensure the reliability of accounting information and the efficiency of operations.

- For example, a supervisor verifies the accuracy of a retail clerk's cash drawer at the end of the day.
- Internal auditors may also verify that the supervisor performed the check of the cash drawer.

Inventory and asset control

- All costs of the manufacturing process are calculated.
- This will ensure correct calculation cost, gross profit and net profit .
- Ensure that no wastage of material occurs
- This will prevent a negative impact on the cost of sales figure.
- Labour and labour cost must also be controlled
- This will ensure that optimal efficiency is maintained.
- The appointment of supervisors who oversee that
 - ☐ Workers do not waste materials and
 - ☐ Workers do not misuse official working hours for private purposes.
- Re-using of raw material waste by having a system in place to put the off-cuts back into the production process, where possible.
- Clock card system in controlling and managing labour costs if workers are paid on a hourly basis.

Internal auditing

- To determine if the internal controls are working and if the accounting information is accurate.
- A manufacturing business should ensure frequent or on-going audit conducted by an independent internal auditor appointed to
 - ☐ Monitor operating results
 - ☐ Verify Financial Records
 - ☐ Evaluate Internal Controls
 - ☐ Assist Management in increasing efficiency and effectiveness of business operations
 - ☐ To detect Fraud

ETHICS

- Ethics refers to the way a business work
- It is based on principles, values and beliefs.
- A code of business ethics is only effective, if management communicates their values to all employees and stakeholders.
- The following are important ethical considerations for manufacturing

Product quality

- Product and services should meet the quality promised to the consumer.
- It must also meet all governmental regulations and specifications and be safe to the consumer.
- Management should inspect regularly for quality.
- Some production functions can be seriously harmful or damaging and therefore need to be monitored.
- The following are worth monitoring;
 - ✓ Technology
 - ✓ Especially with new technology which can be harmful to health, safety and the environment
 - ✓ Technological advancements like genetically modified food, radiations from mobile phones, medical equipment etc. are problems.

- ✓ Defective services and products or products those are innately harmful like alcohol, tobacco, fast motor vehicles, warfare, chemical manufacturing etc.
- ✓ Animal testing and their rights or use of economically or socially deprived people for testing or experimentation
- ✓ Ethics of transactions between the organization and the environment that lead to pollution, global warming, increase in water toxicity and diminishing natural resources

Product age

Indicating the date on products are important information to the consumer as to the life expectancy of a product.

Raw materials

- Ethical consideration taken into account when sourcing raw materials.
- These include consideration about the environment and the manner in which the raw materials are obtained.
- E.g. acquiring precious stones like diamonds should not involve the shedding of blood or oppressing people.
- Scarce resources e.g. crude oil which is available in certain areas in the world.
- Any type of crisis in one of the major supplying countries automatically drives up the price of the raw material in the other countries due to the increase in demand.
- No raw material must be illegally obtained or harmful to the environment from which it is obtained.

Support of local products

- This leads to more employment and raising the standard of living for South Africans.
- This can lead to a powerful tool for eradicating poverty

Theft and fraud

- Fraud is a deception deliberately practiced in order to secure unfair or unlawful gain
- Theft is taking property belonging to another without that person's consent.
- Risk assessment, awareness, control, deterrence and detection all have their part to play in the prevention of fraud.
- E.g. Excessive shrinkage of raw materials could *explain a host of fraudulent activity, from embezzlement to theft of raw materials*