

Job and Process Costing

Definitions

1. **COST CENTRE** – a single department in which costs to the business are incurred
2. **JOB COSTING** – when work is undertaken to a customers' specific requirements. Separate jobs for special orders. All costs are charged to the job. Eg the construction of a ship
3. **BATCH COSTING** - when a quantity of identical articles are manufactured. Eg a quantity of similar houses on an estate
4. **PROCESS COSTING** – a continuous flow of products is produced. Production is repetitive and continuous. Eg oil production or baking cakes. There is however usually more than one process in the manufacture of goods – mix cake ingredients, bake the cakes, package the cakes.
5. **OVERHEAD ALLOTMENT** – where overheads can be traced directly to the units produced
6. **OVERHEAD APPORTIONMENT** – where overheads are not directly traced to the production of a good and have to be shared out between all the different goods produced

Job Costing

Remember that this section focuses on a manufacturing business that produces goods on the basis of specific instructions – each job is different.

Most examination questions require you to:

1. Apportioning overheads of the service departments of the business between the production departments and between the service departments. The most common method used to do this is called the *repeated distribution method*.
2. Calculate Overhead Rates based on labour and/or machine hours used to manufacture a particular product.
3. Drawing up a Job Cost Sheet for jobs performed in the factory (calculating the cost of various jobs).

1. APPORTIONING OVERHEADS BETWEEN DEPARTMENTS:

A manufacturing business will most likely have Service departments in addition to Production departments. Examples of service departments are factory maintenance, machinery maintenance, cleaning departments etc.

These service departments supply their service to the production departments as well as the other service departments. For instance, the machinery maintenance department also maintains the machinery of the factory maintenance department; the cleaning department cleans the machinery maintenance and factory maintenance departments (as well as the production departments).

This means that the overheads of the service departments must be shared by the production departments as well as by the other service departments.

The methods of apportioning overheads of services shared by other departments is the same basis as those used in Absorption Costing:

Floor space; value of machinery; direct labour hours; machinery hours and so on...

See Exhibit 19.2 pg 236-237 and Exercise 19.7 (c) solution pg 412

2. CALCULATING OVERHEAD RATES (for a production department)

Overhead Rates are calculated on the basis of, for example:

The rate per direct labour hour

OR

The rate per machine hour

OR

(Whatever rate basis is given to you in a question.)

The formula to calculate the overhead rate is as follows: (*Direct labour hours is used in this formula but it could be machine hours per departments or any other basis given*):

$$\frac{\text{Total overheads (after apportioning as in 1 above)}}{\text{Number of direct labour hours of the department}}$$

3. CALCULATING THE COST OF A PARTICULAR JOB

A job cost sheet is used to calculate this. Simply **ADD** up the cost of materials, direct labour and the factory overheads (factory overhead rate is based on the overhead rate calculated in 2 above).

An Example of a job cost sheet is on page 239. Exercise 19.2 is a good example that illustrates how to calculate the cost of a particular job

Process Costing

Remember in this system a business produces goods on a continuous system – although the products moves through several processes or stages until it is finished. Each process is treated as a separate cost centre. Overhead Rates will be calculated for each process (as in job costing).

Most **examination questions** require you to:

1. Calculate the Equivalent Production of Work in progress
2. Draw up a Process Account
3. Calculate Abnormal Losses in the production process
4. Calculate under or over absorption of Overheads

1. EQUIVALENT PRODUCTION

In this type of production, there will probably be unfinished goods (WIP) at the beginning and end of each accounting period. The equivalent production must be calculated which means convert unfinished goods into the equivalent of finished goods. In other words, convert WIP into the equivalent quantity of Finished goods

Formula: **number of unfinished units x % of completion**

This total of Equivalent production can then be added to the total of Finished goods produced in the accounting period.

Example:

Finished Goods 2000 units

Unfinished goods total of 1000 were only 80% completed = 800 finished goods (1000x80%).

Total goods produced : 2000 + 800 = 2800

Example:

Finished goods 2000 units

Unfinished goods total of 1000 were :70% completed in materials
60% completed in Labour
50% completed in overhead

	<u>Materials</u>	<u>Labour</u>	<u>Overhead</u>
Finished goods	2000	2000	2000
WIP equivalent production	700	600	500
TOTAL UNITS	<u>2700</u>	<u>2600</u>	<u>2500</u>

Exercise 19.5 is a good exercise to use for learning this concept

2. PROCESS ACCOUNTS

The production of most products involves it moving through a number of different processes before it is a finished good ready to be sold.

Each stage of production (or process) is treated as its' own cost centre. As the product moves from one process to the next stage of production the cost of that process must be transferred to the next stage of production as well. When the product reaches the final process, the total cost is transferred to the Finished Goods Stock.

Exhibit 19.4 on page 240-241 illustrates this. Note that each process has its' own **Process Account**.

3. NORMAL AND ABNORMAL LOSSES

Normal losses: these are losses which cannot be avoided in the production process. Eg the loss of rubber when making the soles of shoes. No accounting entry is made for normal losses as they are considered to be part of the production process

Abnormal losses: these are losses which are avoidable Eg not mixing ingredients properly, use of inferior materials so that many products do not pass quality tests.

Accounting entry for Abnormal losses:

Debit Abnormal Loss account (expense) – written off to profit and loss account

Credit Process account

4. UNDER/OVER ABSORPTION OF OVERHEADS

Overhead rates are based on estimated annual overhead expenditure and production levels. Only at the end of an accounting period can a firm actually say how much they spent on overheads in the production processes. The estimated figure is very rarely the same as the actual overhead costs.

If the overhead rate is based on an estimate of overhead expenditure **HIGHER** than the actual expenditure then there is an **OVER ABSORPTION** of overheads.

Over Absorption = overhead estimate is higher than actual overhead expenses

If the overhead rate is based on an estimate of overhead expenditure **LOWER** than the actual overhead expenditure then there is an **UNDER ABSORPTION** of overheads.

Under Absorption = overhead estimate is lower than actual overhead expenses