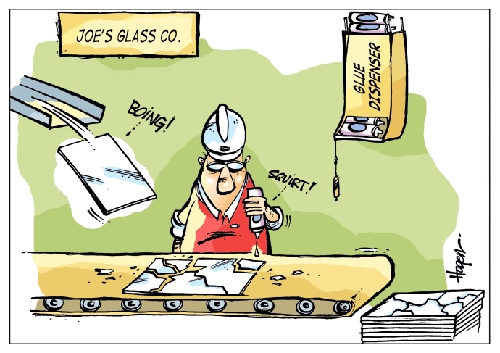
YEAR 13 ACCOUNTING 2011

NELSON COLLEGE

PROCESS FINANCIAL INFORMATION FOR A MANUFACTURING JOB COST SYSTEM

Student Work Book -Answers

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Introduction:**

A **manufacturing enterprise** produces goods for sale by processing raw materials in a factory. In a manufacturing enterprise, **finished goods for sale are not purchased but are produced by the business itself.**

**Cost Accounting (Determining Costs) –** The prime objective of cost accounting is to determine the cost of manufacturing (making) a product or providing a service

Cost of Production

To manufacture goods in a factory human labour and various tools and machinery are used to convert raw materials into a saleable product - a finished good.

The cost of production measures the cost of goods manufactured during the period and is found **by adding the costs of direct materials, direct labour and factory overheads used in production.**

# Materials

Materials used in the production process are made up of:

## Direct materials

* Indirect materials
* **Direct materials** are those materials that are readily traceable to the manufacture of a specific product (e.g. the amount of wood used to make a chair, the amount of petrol used to power the lawn mower or the number of paving stones used to pave a driveway)
* **Indirect materials** are those which are not directly associated with but still necessary to production (repairs and maintenance of the lawn mower, the cleaner’s wages or power).

**Labour**

Labour consists of all the human effort used in the productive process and is of two types:

* Direct labour
* Indirect labour
* **Direct labour**is that labour that is readily traceable to the manufacture of a particular product.
* **Indirect labour** employed in carrying out jobs in the factory which are only indirectly associated with actual production.

Indirect materials and labour are recorded separately from direct materials and labour. These add to what is known as ‘***Factory Overhead***’

# Factory Overhead

Factory overhead includes all the expenses, over and above direct materials and direct labour, which are necessary to keep the factory running. Factory overhead includes indirect material costs and indirect labour costs and other manufacturing expenses such as factory light and power, depreciation on factory plant and equipment, repairs and maintenance and factory insurance.

**Questions:**

1. ***Identify which of the following are direct costs and indirect costs for a building firm.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Item** | **Direct or Indirect** |  | **Item** | **Direct or Indirect** |
| **1** | Supervisors salary | I | **6** | Delivery costs of product to building firm | I/D |
| **2** | Bricks for buildings | D | **7** | Roofing Iron | D |
| **3** | Advertising of product | N | **8** | Depreciation on equipment | I |
| **4** | Sales of houses | N | **9** | Builders’ wages | D |
| **5** | Stationery | I | **10** | Wood | I |

1. ***Identify which of the following are direct costs and indirect costs for a legal firm.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Item** | **Direct or Indirect** |  | **Item** | **Direct or Indirect** |
| **1** | Court costs for case | D | **6** | Toll calls to client | D |
| **2** | Depreciation on office equipment | I | **7** | Lawyer hours on case | D |
| **3** | Stationery | I | **8** | Repairs to equipment | I |
| **4** | Lawyer association fees | I | **9** | Subscriptions to NZ Legal | I |
| **5** | Office shouts | N | **10** | Cleaners wages | I |

1. ***List 5 direct costs and 5 indirect costs for a bakery.***

|  |  |
| --- | --- |
| **Direct Costs** | **Indirect Costs** |
| ***1. Flour*** | ***1. Cleaner’s wages*** |
| ***2. Meat*** | ***2. Depreciation on Oven*** |
| ***3. Fruit*** | ***3. Phone expense*** |
| ***4. Bakers Wages*** | ***4. Power*** |
| ***5. Butter*** | ***5. Rent of Building*** |

**Work in Progress**

Work in progress consists of partially completed goods at the end of an accounting period. It appears in the statement of financial position as a current asset. Often jobs are transferred from work in progress in one department to work in progress in another department. ***The journal entry for this would be:***

**DR** Work in Progress (Department transferred to)

**CR** Work in Progress (Department transferred from)

**Cost of production**

= Work in progress at the beginning of a period

**+ Direct Materials**

**+ Direct Labour**

**+ Factory Overhead**

* *Work in progress at the end of the period*

**Product Costing Systems**

In manufacturing enterprises there is a need for managers to have frequent and detailed information on the costs of manufacturing each type of product. ***It is important that costs are correctly allocated to jobs as a number of decisions are based on the accuracy of this information. Such decisions as follows are only as good as the information provided:***

* *The prices at which the products may be sold*
* *Whether it is profitable to manufacture a certain type of product*
* *Assessing manufacturing performance*

##### ***Therefore the objectives of a costing system are to:***

* To provide accurate information for quotes for customers
* To accurately record materials and labour used on a job
* To accurately charge out overheads incurred by the business
* To avoid under or overcharging for jobs

##### **Job Costing**

When the type of manufacturing being undertaken has the features of being intermitted or low volume or custom operations or one off operations, the product costing system must as far as possible avoid averaging costs. The product system must instead trace the costs incurred in manufacturing each product to the cost records for that product.

Job order costing is used to calculate the manufacturing costs of one-off products. The products are identifiable – this means that costs can generally be traced to each product (direct materials and direct labour). There is however a problem with factory overhead costs which cannot be traced.

A job cost system uses actual costs of direct labour and direct materials for each job. Overhead costs are not directly assignable to a job and are assigned on a **predetermined basis** to each job.

**Predetermined Overhead Rates**

To work out an overhead rate the manufacturer must:

* Estimate the business overhead rate for the coming year.
* Choose an activity measure or base to apportion the overheads. This should be highly correlated with overhead consumption. ***The base used for allocating overheads should best reflect the consumption of overheads in that business, because it is the main driver (incurs the most factory overhead).*** For example labour-intensive products would suit a direct labour base, a machine-intensive process a machine hour rate (as most of the maintenance on the machine and power used on the machine (overheads) is related to the number of hours it is used.

There are five frequently used bases for allocating factory overhead **(cost drivers):**

* **Direct labour hours**
* **Direct labour costs**
* **Direct machine hours**
* Units of output
* Direct material costs

**Predetermined overhead rate = Budgeted Overhead**

**Budgeted Cost Driver**

The overhead rate is then used to apply costs to each job.

###### Applied Overhead = Overhead Rate X Actual Activity Base

Example: ABC Productions uses machine hours to allocate overhead. For the year ended 31 March 2011, they estimate that they will have $100,000 of overheads and will use 10,000 machine hours. Overhead will be applied at the following rate:

**100,000**

**10,000** **= $10 per machine hour (or 1,000% of machine hours)**

***Therefore:***

If a job takes 140 hours, overhead will be applied at **$10 X 140** Hours = **$1,400**

Some times a firm have different overhead rates for different departments (.e.g. the machining department and the finishing department as the consumption of overheads will differ in each department).

**Questions:**

1. Crazy Cats make cat houses. The following are their ***estimates*** for the year ended 31 March 2011:

* Direct Materials 100,000
* Labour Costs 200,000
* Labour Hours 10,000
* Machinery Hours 5,000
* Overheads 300,000

|  |  |  |
| --- | --- | --- |
| **Calculate the Predetermined Overhead Rates based on** | | |
| **Labour Costs** | **Labour Hours** | **Machinery Hours** |
| Workings:  *300,000/200,000* | Workings:  *300,000/10,000* | Workings:  *300,000/5,000* |
| Rate:  *$1.5 per labour $* | Rate:  *$30 per labour hour* | Rate:  *$60 per Machinery hour* |

1. Bobby’s Boats makes boats. The following are their ***estimates*** for the year ended 31 March 2011:

* Direct Materials 300,000
* Labour Costs 100,000
* Labour Hours 15,000
* Machinery Hours 20,000
* Overheads 200,000

|  |  |  |
| --- | --- | --- |
| **Calculate the Predetermined Overhead Rates based on** | | |
| **Labour Costs** | **Labour Hours** | **Machinery Hours** |
| Workings:  *200,000/100,000* | Workings:  *200,000/15,000* | Workings:  *200,000/20,000* |
| Rate:  *$2 per labour $* | Rate:  *$13.33 per labour hour* | Rate:  *$10 per machinery hour* |

1. J-Rod Ltd makes Dart Boards to order. His estimated Overheads for the year are $50,000. These are applied on estimated labour hours of 10,000. Labour is charged out at $40 per hour.
2. ***Calculate his Predetermined Overhead rate***

|  |
| --- |
| *50,000/10,000 =$5 per labour hour* |

1. ***Complete the table below using the following information:***

* The Smith Job used 10 labour hours, $300 of materials
* The Royal job used 30 labour hours and $800 of materials
* The Dutch job used 5 labour hours and $50 of materials
* The Wright job used 15 labour hours and $250 of material

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Job Name** | **Materials** | **Labour** | **Overhead** | **Total Costs** |
| Smith | *300* | *400* | *50* | *750* |
| Royal | *800* | *1,200* | *150* | *2,150* |
| Dutch | *50* | *200* | *25* | *275* |
| Wright | *250* | *600* | *75* | *925* |

[](http://www.google.co.nz/imgres?imgurl=http://images.hayneedle.com/mgen/master:GG033.jpg?is=1600,1600,0xffffff&imgrefurl=http://www.dartboards.com/dart-boards/bristle-dart-boards/shotkingbristledartboard.cfm&usg=__2FDAqD3QhzCWVLVq96g57jMfp64=&h=1600&w=1600&sz=573&hl=en&start=34&zoom=1&tbnid=Z8vxA5D-mqOdlM:&tbnh=150&tbnw=150&ei=ViqWTfKaKKriiAKgs4jwCA&prev=/images?q=dart+boards&hl=en&sa=G&biw=1596&bih=691&gbv=2&tbs=isch:1&itbs=1)[](http://www.google.co.nz/imgres?imgurl=http://images.pictureshunt.com/pics/s/shooting_darts-13661.png&imgrefurl=http://free-extras.com/images/shooting_darts-13661.htm&usg=__UM7oIuRs1SYpHrVNdYDCOrQnB6I=&h=423&w=500&sz=56&hl=en&start=114&zoom=1&tbnid=jBcCF3d_-joCRM:&tbnh=123&tbnw=145&ei=TCqWTav3JYb6sAO62sjFBQ&prev=/images?q=dart+boards&hl=en&sa=G&biw=1596&bih=691&gbv=2&tbs=isch:1&itbs=1&iact=rc&dur=16&oei=OiqWTeKbG8jZiAKFyLXyCA&page=4&ndsp=38&ved=1t:429,r:11,s:114&tx=75&ty=38)

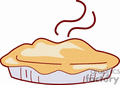
1. P- Ma make novelty pies to order, in a specially designed pie oven. His estimated overheads for the year are $20,000. Overhead is applied based on the oven hours which he estimates to be 2,000 this year.
2. ***Calculate his Predetermined Overhead rate***

|  |
| --- |
| *20,000/2,000 = $10 per oven hour* |

1. ***Complete the table below using the following information:***

* Josh Pie Order - labour was $104, ingredients were $206 and 10 oven hours were used.
* Emily Pie Order - labour was $38, ingredients were $20 and 2 oven hours were used.
* Westy Pie Order - labour was $44, ingredients were $106 and 5 oven hours were used.
* Roy Pie Order - labour was $500, ingredients were $400 and 20 oven hours were used.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Job Name** | **Materials (ingredients)** | **Labour** | **Overhead** | **Total Costs** |
| Josh | *206* | *104* | *100* | *410* |
| Emily | *20* | *38* | *20* | *78* |
| Westy | *106* | *44* | *50* | *200* |
| Roy | *400* | *500* | *200* | *1,100* |



1. Bon-Sai grows a range of Bonsai plants for rich customers who have nothing better to do with their money. The plants are first reared in a fully automated glasshouse. They are then transferred to the nursery where they are hand pruned and wired. The overhead incurred in the *glasshouse is applied based on the hours the sprinkler system is used* and in the *nursery is based on labour hours.* Bon-Sai provides you with the following ***estimates*** for the year:

|  |  |  |
| --- | --- | --- |
|  | **Glasshouse** | **Nursery** |
| Direct labour Hours | 1,000 | 5,000 |
| Sprinkler hours | 3,000 | 1,000 |
| Estimated overheads | 30,000 | 10,000 |

1. ***Calculate his predetermined overhead rate for each department***

|  |  |
| --- | --- |
| Glasshouse  *30,000/3,000*  *= $10 per sprinkler hour* | Nursery  *10,000/5,000*  *= $2 per Labour Hour* |

A tree was designed for Mrs Poodle to look like a poodle. The costs incurred were:

* Glasshouse – Direct Materials used $200, Labour $100 and 500 sprinkler hours were used
* Nursery – Direct Materials used $50, Labour $400 (10 labour hours)

1. Use the information above to complete the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Mrs Poodle - *Job cost Card*** *(ask your teacher what this is)* | | | |
|  | Glasshouse | Nursery | Total |
| Labour | *100* | *400* | *500* |
| Direct Materials | *200* | *50* | *250* |
| Overhead | *5000* | *20* | *5,020* |
| Total Costs | *5300* | *470* | *5,770* |



***Overheads Continued...***

The theory of the overhead rate is to as accurately as possible distribute the overhead costs over the production period

Under or Over Applied Overhead

As ***overhead*** is ***allocated*** to jobs ***based on budgeted figures*** at the beginning of the period it is unlikely that these figures will be exactly the same as the actual figures. Thus the ***budgeted overhead rate applied will result in a different amount of overhead applied than what was actually incurred*** so there will be ***over/under-applied overhead.***

If the ***actual factory overhead*** is ***greater than the factory overhead applied then there is an under provision of factory overhead*** (and vice versa).

***Under or over applied overhead*** ***is closed from the factory overhead control account to the cost of goods sold*** for a business that produces a good and to the financial performance summary for a business that produces a service.

**Over Provision** = CR to Cost of Goods Sold/Income Summary

**Under Provision** = DR to Cost of Goods Sold/Income Summary

**Theory Questions:**

1. **Explain what the affect of under-applied overhead would be the price charged for a good and the profit margin.**

*Under applied overhead means that not enough overhead has been applied to jobs. The costs applied to the job would not be enough.*

1. **Explain what the affect of Under-applied overhead would be on the price charged and a likely consequence of this.**

*Over applied overhead means that too much overhead has been applied to jobs. The jobs would be costed to high, and customers may decide not to buy as it is too high.*

**Questions Continued:**

1. Freddy’s furniture factory fixes failing furniture. They get old furniture, dip strip it, repair it and then vanish it. Freddy provides you with the following information for the year ended 31 March 2011:

|  |  |  |
| --- | --- | --- |
|  | **2011 Estimated Figures** | **2011 Actual Figures** |
| **Machine Hours** | 5,000 | 6,000 |
| **Direct Labour Costs** | $200,000 | $200,000 |
| **Direct Labour Hours** | 10,000 | 9,000 |
| **Overhead** | $200,000 | $205,000 |

*Complete the table below using the information above to show the overhead rates, applied, actual and over/under-applied overhead:*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost Driver** | **Predetermined overhead rate** | **Overhead applied** | **Actual Overhead** | **Over-applied / under-applied** |
| **Machine Hours** | *200,000/5,000*  *= $40/mhr* | *6,000X40*  *$240,000* | *$205,000* | *$35,000 over applied* |
| **Direct Labour Hours** | *200,000/10,000*  *= $20/lab hour* | *9,000x$20*  *$180,000* | *$205,000* | *$25,000 under applied* |
| **Direct Labour Costs** | *200,000/200,000*  *= $1/labour cost* | *$200,000x$1*  *$200,000* | *$205,000* | *$5,000 under applied* |

1. Play House Ltd produces small houses that children can sleep in. They make them out of wood and other materials. They are a kitset design, with much of the labour and work needed to cut the parts into shape. Play House provides you with the following information for the year ended 31 March 2011:

|  |  |  |
| --- | --- | --- |
|  | **2011 Estimated Figures** | **2011 Actual Figures** |
| **Machine Hours Costs** | 1,000 | 1,200 |
| **Direct Labour Costs** | $40,000 | $36,000 |
| **Direct Labour Hours** | 1,200 | 1,300 |
| **Overhead** | $60,000 | $55,000 |

*Complete the table below using the information above to show the overhead rates, applied, actual and over/under-applied overhead:*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost Driver** | **Predetermined overhead rate** | **Overhead applied** | **Actual Overhead** | **Over-applied / under-applied** |
| **Machine Hours** | *$60,000/1,000 = $60/DMH* | *$60 X 1,200 = $72,000* | *$60,000* | *$12,000 over applied* |
| **Direct Labour Hours** | *$60,000/1,200 = $50/DLH* | *$50 X 1,300 = $65,000* | *$60,000* | *$5,000 over applied* |
| **Direct Labour Costs** | *$60,000/$40,000 = $1.5/DL$* | *$40,000 X 1.5 = $54,000* | *$60,000* | *$6,000 under applied* |

Source Documents

Job Cards

Each job as it progresses through the production process will be allocated a **job card** on which will be recorded any materials used and the time spent on the job by workers.

***The Purpose*** *of a* *job cost card is to accumulate costs related to each individual job. They are the subsidiary ledger records for Work in progress and Finished goods in the general ledger.*

When the job is finished, or at the end of a period, the job cards will be processed in the factory office where values will be added. **Job cost Cards can take various forms (depending on the business’s needs) but have the information below:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Job Card | | | | | | |
| **Job Number:** 228 | | | **Description:** Rimu Table | | | |
| **Date Started:** 28/3/2011 | | | **Date Completed:** 03/04/2011 | | | |
| **Date** | **Raw Materials** | | **Labour** | | **Factory Overhead** | |
|  | **Materials Requisition number** | **Amount** | **Hours** | **Amount** | **Overhead rate** | **Amount** |
| 28/03/11 | 3399 | $100 | 5 | $200 |  |  |
| 03/04/11 |  |  | 8 | $320 |  |  |
| 03/04/11 |  |  |  |  | $10/LH | $130 |
|  |  |  |  |  |  |  |
| **Total** |  | $100 |  | $520 |  | $130 |
| **Total Cost of Job:** $750 | | | | | | |

**Internal Controls for Job Cost Cards:**

All jobs that go through a job cost system should be allocated a Job Cost Card to ***accumulate costs related to each individual job.*** The **balance of the work in progress control account** will be the **same as the total of all the job cost cards of incomplete jobs.**

**Packaging Slip**

A packaging slip list the goods that should have been sent by the supplier and that are received by the business. The items received should be checked against the packaging slip, order form and the invoice, to see that what has been ordered has been received and it is what will be paid for.

**Time Records/Time Sheets**

The ***Purpose of a time sheet*** is to record information about the time worked by employees. They are then used to allocate the cost of time worked on certain jobs to job cost sheets/work in progress.

**Internal Controls for a time sheet**

* The time sheets are authorised by a supervisor to see that the hours worked on a job are correct and that each job is allocated the correct amount of direct labour
* Time Sheets are matched with the hours allocated to all the jobs over a period (they should equal) to ensure that all cost have been correctly allocated.

Materials Requisition

The Purpose of a Materials Requisition form is to issue and authorise the usage of materials for a particular job.

**Internal controls of a materials requisition form:**

* They are signed (by someone with the authority to do so – e.g. store manager) so that raw materials are only issued to jobs when needed and to lessen the chance that they are used for personal use.
* Materials can only leave the warehouse/store with a materials requisition form – to lessen the chance that they are taken for personal use

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***ABC Limited***  **Materials Requisition** | | | | **No.387783** |
| **Charge to job Number: 3874** | | | | |
| **List of Materials Required** | | | **Date: 28/05/2011** | |
| **Quantity** | **Item Number** | **Description** | **Unit Price** | **Amount** |
| **5** | **118** | **Bricks** | **$10** | **$50** |
| **10** | **100** | **Window frames** | **$100** | **$1,000** |
|  |  |  |  |  |
| **Materials taken by: *Simon David* (Employee name)**  **Authorised by: Jack Strong (Warehouse Supervisor)** | | | | |

**Invoice**

The purpose of an invoice is to inform/charge customers for work done/job completed

|  |  |  |
| --- | --- | --- |
| **SMITH AND SMITH Tax Invoice 3877**  **Address: 18 Beat Street, Nelson GST No. 22-333-444** | | |
| **Invoice To: Date: 12/08/2011**  E-Cell Ltd  13 Bad Street, Nelson  **Customer Order Number: 7659** | | |
| **Description** | **Quantity** | **Amount** |
| Window | 1 | $200 |
| Frame | 2 | $100 |
| **Sub Total**  **GST**  **Total** | | $300 |
| $45 |
| $345 |

***Questions: For Source Documents***

***Complete the following Material Requisition Forms for ABC Limited***

1. John Little got 6 bricks (item #3344) from the store at a unit cost of $30 each on 1 July 2011. He also got 1 bag of cement (item # 3333) with a unit cost of $10 on the same date. King Kong was the warehouse manager. Job Number 118.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***ABC Limited***  **Materials Requisition** | | | | **No.387783** |
| **Charge to job Number: *118*** | | | | |
| **List of Materials Required** | | | **Date: 1/7/2011** | |
| **Quantity** | **Item Number** | **Description** | **Unit Price** | **Amount** |
| ***6*** | ***3344*** | ***bricks*** | ***$30*** | ***$180*** |
| ***1*** | ***3333*** | ***cement*** | ***$10*** | ***$10*** |
|  |  |  |  |  |
| **Materials taken by: *John Little* (Employee name)**  **Authorised by *King Kong* (Warehouse Supervisor)** | | | | |

1. John Big got 12 iron rods (item #3366) from the store at a unit cost of $3 each on 1 July 2011. He also got 2 bags of pre mix glue (item #1188) with a unit cost of $15 on the same date. King Kong was the warehouse manager. Job #119

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***ABC Limited***  **Materials Requisition** | | | | **No.387784** |
| **Charge to job Number: *119*** | | | | |
| **List of Materials Required** | | | **Date:*1/7/2011*** | |
| **Quantity** | **Item Number** | **Description** | **Unit Price** | **Amount** |
| ***12*** | ***3366*** | ***Iron rods*** | ***$3*** | ***$36*** |
| ***2*** | ***1188*** | ***Pre mix glue*** | ***$15*** | ***$30*** |
|  |  |  |  |  |
| **Materials taken by:** *John Big* **(Employee name)**  **Authorised by: *King Kong* (Warehouse Supervisor)** | | | | |

***Complete the following Job Cost Cards***

1. *ABC Bakery* received an order for 20 Special Fruit Cakes on October 10th 2011, job number 52. The job was finished on the same day.

* To begin the job a worker makes out a materials requisition form (#157, cost $147.50) to give to the person in charge of Materials Inventory. This will allow the materials necessary for the job to be taken from the stores area to the work area.
* During the day workers will start work on the cakes (adding ingredients, mixing, baking etc). Three workers do this with labour cost for Worker No.1 $15, Worker No.2 $8 and Worker No.3 $20.Each worked 1 hour
* Factory Overhead is then applied to the job (based on direct labour hours as it is a labour intensive process). Factory overhead expense for the year is expected to be $15,000 and labour hours for the year are expected to be 10,000. To calculate the rate: $15,000/10,000 = $1.50 per direct labour hour.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Job Card | | | | | | |
| **Job Number: *52*** | | | **Description: *special fruit cakes*** | | | |
| **Date Started: *10/10/11*** | | | **Date Completed: *10/10/11*** | | | |
| **Date** | **Raw Materials** | | **Labour** | | **Factory Overhead** | |
|  | **Materials Requisition number** | **Amount** | **Hours** | **Amount** | **Overhead rate** | **Amount** |
| ***10/10/11*** | ***157*** | ***147.5*** | ***1*** | ***15*** | ***1.5*** | ***4.5*** |
|  |  |  | ***1*** | ***8*** |  |  |
|  |  |  | ***1*** | ***20*** |  |  |
|  |  |  |  |  |  |  |
| ***Total*** |  | ***147.5*** |  | ***43*** |  | ***4.5*** |
| **Total Cost of Job: *$*195** | | | | | | |

1. *ABC Joinery Ltd* received an order for a kitchen bench on October 15th 2011, job number 87. The job was completed on 19th October.

* A materials requisition form (#118, cost $1,500 on15/10/11) is completed for the job.
* Over the next week the worker spends 40 hours working on the bench at a rate of $25 per hour.
* Factory Overhead is applied to the job based on direct labour hours. Factory overhead expense for the year is expected to be $150,000 and labour hours for the year are expected to be 5,000.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Job Card | | | | | | |
| **Job Number: *87*** | | | **Description: *Kitchen Bench*** | | | |
| **Date Started: *15/10/2011*** | | | **Date Completed: *19/10/2011*** | | | |
| **Date** | **Raw Materials** | | **Labour** | | **Factory Overhead** | |
|  | **Materials Requisition number** | **Amount** | **Hours** | **Amount** | **Overhead rate** | **Amount** |
| ***15/10/11*** | ***118*** | ***$1,500*** |  |  |  |  |
| ***19/10/11*** |  |  | ***40*** | ***$1,000*** | ***$30/dlh*** | ***$1,200*** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Total** |  | ***$1,500*** |  | ***$1,000*** |  | ***$1,200*** |
| **Total Cost of Job: *$3,700*** | | | | | | |

***Complete the following Invoices***

1. *ABC Joinery* finishedthe manufacture of four sets of kitchen cabinets. The **total cost** of the job was $14,000. The mark-up on this job was 200%, and it was sold on credit to B Strong (Po Box 818 Nelson) on the 16th October 2011.

|  |  |  |
| --- | --- | --- |
| ***ABC Joinery* Tax Invoice 3877**  **Address: 16 Alton Street, Nelson GST No. 22-333-444** | | |
| **Invoice To: Date: *16/10/2011***  ***B Strong***  ***PO Box 18***  ***NELSON***  **Customer Order Number: 7659** | | |
| **Description** | **Quantity** | **Amount** |
| ***Kitchen Cabinets*** | ***4*** | ***$42,000*** |
| **Sub Total**  **GST**  **Total** | | ***$42,000*** |
| ***$6,300*** |
| ***$48,300*** |

1. *XYZ Painters completed a house they had been working on*. The **total cost** of the job was $10,000. The mark-up on this job was 150%. The invoice was sent to B Happy (8 New Street, Nelson) on the 16th Jan 2011.

|  |  |  |
| --- | --- | --- |
| ***XYZ Painters* Tax Invoice 4877**  **Address:** 111 New Street, Nelson **GST No. 22-333-555** | | |
| **Invoice To: Date:** *16 Jan 2011*  ***B Happy***  ***8 New Street***  ***NELSON***  **Customer Order Number: 7659** | | |
| **Description** | **Quantity** | **Amount** |
| ***Painting House*** | ***1*** | ***$25,000*** |
| **Sub Total**  **GST**  **Total** | | ***$25,000*** |
| ***$3,750*** |
| ***$28,750*** |

***Source Documents – Additional Questions:***

1. Use the information below to complete the Job Cost card for Boat Builders Ltd for Job 181.

* Overhead is based on labour hours at a rate of $15 per labour hour
* For the Further material were issued to the job of $1,000 (Materials Requisition 234) on May 2nd.
* On May 2nd and May 3rd 10 hours of labour each day was spent on the boat at a cost of $50 per hour.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Boat Builders LtdJob Card | | | | | | |
| **Job Number:** 181 | | | **Description: 12 Foot Glass** | | | |
| **Date Started:** 1 May 2011 | | | **Date Completed** | | | |
| **Date** | **Raw Materials** | | **Labour** | | **Factory Overhead** | |
|  | **Materials Requisition number** | **Amount** | **Hours** | **Amount** | **Overhead rate** | **Amount** |
| 1/05/11 | 161 | $3,000 |  |  |  |  |
| ***2/5/11*** | ***234*** | ***$1,000*** |  |  |  |  |
| ***2/5/11*** |  |  | ***10*** | ***$500*** |  |  |
| ***3/5/11*** |  |  | ***10*** | ***$500*** | ***$15/dlh*** | ***$300*** |
|  |  |  |  |  |  |  |
| **Total** |  | ***$4,000*** |  | ***$1,000*** |  | ***$300*** |
| **Total Cost of Job *$5,300*** | | | | | | |

1. Job 181(above) was invoiced to the client, Thomas Hank on 5th May 2011 (17 Sole Street, Auckland). It had a 250% mark-up. Complete the invoice below.

|  |  |  |
| --- | --- | --- |
| **Boat Builders Ltd Tax Invoice 4877**  **Address:** Main Road Stoke, Nelson **GST No. 22-333-555** | | |
| **Invoice To: Date: *5 May 2011***  ***Thomas Hank***  ***17 Sole Street***  ***Auckland***  **Customer Order Number: 7659** | | |
| **Description** | **Quantity** | **Amount** |
| ***12 Foot Glass Boat*** | ***1*** | ***$18,550*** |
| **Sub Total**  **GST**  **Total** | | ***$18,550*** |
| ***$2,782.50*** |
| ***$21,332.5*** |

Job Costing Entries – Journal Entries

1. To Purchase Raw Materials

**DR** Raw Materials

**DR** GST (normally includes GST)

**CR** Accounts Payable/Bank

1. To Issue Raw Materials to a job(s)

**DR** Work in Progress

**CR** Raw Materials

1. To Issue Indirect Materials

**DR** Factory overhead

**CR** Raw materials

1. To Issue Direct Labour used in jobs

**DR** Work in progress

**CR** Factory Payroll

1. To Issue Indirect Labour used in jobs

**DR** Factory Overhead Control

**CR** Factory Payroll

1. **Factory Overhead Applied to jobs (check out rate and method)**

**DR** Work in progress

**CR** Factory Overhead Control

1. **The Payment of other Factory Overhead Expenses** (these expense would be paid prior to this – the following journal entry is the allocating them to factory overhead)

**DR** Factory Overhead Control

**CR** Other Expenses (e.g. Factory Power, Factory Rates etc)

1. To transfer Jobs Completed (From Work in Progress to Finished Goods)

**DR** Finished goods

**CR** Work in progress

1. **Finished Goods Sold**

**DR** Cost of Goods Sold

**CR** Finished goods

1. **The selling Price of Finished Goods Sold (Credit/Cash)**

**DR** Accounts Receivable/Bank

**CR** GST

**CR** Sales

1. **Transfer of Under Applied overhead (reverse if over applied)**

**DR** Cost of Goods Sold

**CR** Factory Overhead Control

**Ledger Entries** (See last page of booklet for diagram)

* ***Remember to enter the opening balances.***
* The ledger accounts given are the control accounts (i.e. work in progress has the total of all the work for each individual job being worked on recorded in it.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Raw Materials Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | Balance |  |  | XXX DR |
|  | **A** - Accounts Payable (Bank) | XXX |  | XXX DR |
|  | **1** - Work In Progress |  | XXX | XXX DR |
|  | **2** – Factory Overhead Control |  | XXX | XXX DR |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factory Payroll Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | Bank | XXX |  | XXX DR |
|  | **3** - Work In Progress |  | XXX | XXX DR |
|  | **4** – Factory Overhead Control |  | XXX | XXX DR |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factory Overhead Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | **2** - Raw Materials | XXX |  | XXX DR |
|  | **4** - Factory Payroll | XXX |  | XXXDR |
|  | **B** - Factory Expenses | XXX |  | XXX DR |
|  | **5** - Work In Progress |  | XXX | XXX DR |
|  | **9** – Cost of Goods Sold | XXX or | XXX | ***0 balance*** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Work In Progress Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | Balance |  |  | XXX DR |
|  | **1**- Raw Materials | XXX |  | XXX DR |
|  | **3** - Factory Payroll | XXX |  | XXX DR |
|  | **5** - Factory Overhead | XXX |  | XXX DR |
|  | **6** - Finished Goods |  | XXX | XXX DR |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Finished Goods Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | Balance |  |  | XXX DR |
|  | **6** - Work In Progress | XXX |  | XXX DR |
|  | **7** - Cost Of Goods Sold |  | XXX | XXX DR |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost of Goods Sold** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | **7** - Finished Goods | XXX |  | XXX DR |
|  | **9** - Factory Overhead | XXX or | XXX | XXX DR |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sales** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
|  | **8** - Accounts Receivable/Bank |  | XXX | XXX CR |

Complete - JOB-ORDER COSTING EXERCISE (1)

Furniture Suppliers Ltd manufactures a variety of tables to meet the specific requirements of their various customers.

The following information was provided to you about the firm:

* Overheads are allocated at $20.00 per direct labour hour
* The firms charges a 100% mark-up on products sold
* At the end of the financial year (31 March) any over-applied or under-applied overhead is closed off to Cost of Goods Sold.

On March 1 2002, the following balances existed in the ledger accounts of Furniture Supplies LTD:

* Raw Materials Control $10,000
* Work in Progress Control $ 6,000
* Factory Overhead Control $ 2,000
* Finished Goods Control $ 5,000
* Cost of Goods Sold $80,000

During March the following transactions took place:

* Paid wages $10,000
* Purchases of Raw Materials on Credit amounted to $20,700 (including GST)
* Actual Overhead costs for the month ($2,000 electricity, $3,000 rates, $1,000 repairs and depreciation $2,000 – all excluding GST)
* Direct Raw Materials issued to jobs was $7,000
* Indirect Raw Materials issued were $1,000
* Direct Labour costs were (500 hours) $9,000

# Indirect Labour costs were $1,000

* Job number 101, 102 and 103 (costing $25,000) were completed during March and transferred to finished Goods. Jobs 101 and 102 (costing $22,500) were invoiced to customers. There were other jobs in the factory still to be completed.

**Required:**

1. Complete the General Journal Entries
2. Complete the ledger accounts – remember to enter the opening balances where required

**General Journal Entries:**

1. **Purchase of raw materials on credit**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/03/02* | *Raw Materials* | *18,000* |  |
|  | *GST* | *2,700* |  |
|  | *Accounts Payable* |  | *20,700* |

1. **Issues of direct materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/03/02* | *Work in Progress* | *7,000* |  |
|  | *Raw Materials* |  | *7,000* |

1. **Issue of Indirect materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Factory Overhead* | *1,000* |  |
|  | *Raw Materials* |  | *1,000* |

1. **Direct Labour used in jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in Progress* | *9,000* |  |
|  | *Factory Payroll* |  | *9,000* |

1. **Indirect Labour used in jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/03/02* | *Factory Overhead* | *1,000* |  |
|  | *Factory Payroll* |  | *1,000* |

1. **Factory overhead applied**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/03/02* | *Work in Progress* | *10,000* |  |
|  | *Factory Overhead* |  | *10,000* |

1. **Jobs completed**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Finished Goods* | *25,000* |  |
|  | *Work in Progress* |  | *25,000* |

1. **Adjust under applied overhead**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/03/02* | *Cost Of Goods Sold* | *2,000* |  |
|  | *Factory Overhead* |  | *2,000* |

1. **Sale of goods**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/03/02* | *Cost of Goods Sold* | *22,500* |  |
|  | *Finished Goods* |  | *22,500* |
|  | *Accounts Receivable* | *51,750* |  |
|  | *Sales* |  | *45,000* |
|  | *GST* |  | *6,750* |

**FURNITURE SUPPLEIS LTD – GENERAL LEDGER**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Raw Materials Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *10,000 dr* |
| *31/3/02* | | *Accounts Payable* | | *18,000* | |  | | *28,000 dr* |
|  | | *Work In Progress* | |  | | *7,000* | | *21,000 dr* |
|  | | *Factory Overhead Control* | |  | | *1,000* | | *20,000 dr* |
| **Factory Payroll Control Account** | | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | | |
| *1/3/02* | *Bank* | | *10,000* | |  | | *10,000 dr* | | |
|  | *Work In Progress* | |  | | *9,000* | | *1,000 dr* | | |
|  | *Factory Overhead Control* | |  | | *1,000* | | *-* | | |
| **Factory Overhead Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *2,000 dr* |
| *31/3/02* | | *Raw Materials* | | *1,000* | |  | | *3,000 dr* |
|  | | *Factory Payroll* | | *1,000* | |  | | *4,000 dr* |
|  | | *Electricity* | | *2,000* | |  | | *6,000 dr* |
|  | | *Rates* | | *3,000* | |  | | *9,000 dr* |
|  | | *Repairs* | | *1,000* | |  | | *10,000 dr* |
|  | | *Depreciation* | | *2,000* | |  | | *12,000 dr* |
|  | | *Work In Progress* | |  | | *10,000* | | *2,000 dr* |
|  | | *Cost of Goods Sold* | |  | | *2,000* | | ***-*** |
| **Work In Progress Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *6,000 dr* |
| *31/3/02* | | *Raw Materials* | | *7,000* | |  | | *13,000 dr* |
|  | | *Factory Payroll* | | *9,000* | |  | | *22,000 dr* |
|  | | *Factory Overhead* | | *10,000* | |  | | *32,000 dr* |
|  | | *Finished Goods* | |  | | *25,000* | | *7,000 dr* |
| **Finished Goods Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *5,000 dr* |
| *31/3/02* | | *Work In Progress* | | *25,000* | |  | | *30,000 dr* |
|  | | *Cost Of Goods Sold* | |  | | *22,500* | | *7,500 dr* |
| **Cost of Goods Sold** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *80,000 dr* |
| *31/3/02* | | *Finished Goods* | | *22,500* | |  | | *102,500 dr* |
|  | | *Factory Overhead* | | *2,000* | |  | | *104,500 dr* |
| **Sales** | | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | | |
| *31/3/02* | *Accounts Receivable* | |  | | *45,000* | | *45,000 cr* | | |

Complete - JOB-ORDER COSTING EXERCISE (2)

Kitchen Designs LTD manufactures a variety of kitchens to meet the specific requirements of their various customers.

The following information was provided to you about the firm:

* Overheads are allocated based on labour hours (budgeted overheads for the year are $100,000 and budgeted labour hours are 4,000)
* The firms charges a 200% mark-up on products sold
* At the end of the financial year (31 March) any over-applied or under-applied overhead is closed off to Cost of Goods Sold.

On March 1 2002, the following balances existed in the ledger accounts of Furniture Supplies LTD:

* Raw Materials Control $ 20,000
* Work in Progress Control $ 40,000
* Factory Overhead Control $ 3,000
* Finished Goods Control $ 9,000
* Cost of Goods Sold $100,000

During March the following transactions took place:

* Paid wages $7,000
* Purchases of Raw Materials on Credit amounted to $23,000 (including GST)
* Actual Overhead costs for the month ($1,000 electricity, $2,000 rates, $1,000 repairs and depreciation $2,000 – all excluding GST)
* Direct Raw Materials issued to jobs was $10,000
* Indirect Raw Materials issued were $2,000
* Direct Labour costs were ( 600hours) $15,000

# Indirect Labour costs were $1,000

* Kitchens with job numbers of C01, C02 and C03 (costing $27,000) were completed during October and transferred to finished Goods. Jobs C01 and C02 (costing $18,000) were invoiced to customers. There were other jobs in the factory still to be completed.

Required:

1. Complete the General Journal Entries
2. Complete the ledger accounts – remember to enter the opening balances where required

General Journal Entries:

1. **Purchase of raw materials on credit**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Raw Materials* | *20,000* |  |
|  | *GST* | *3,000* |  |
|  | *Accounts Payable* |  | *23,000* |

1. **Issues of direct materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in progress* | *10,000* |  |
|  | *Raw materials* |  | *10,000* |

1. **Issue of Indirect materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Factory Overhead* | *2,000* |  |
|  | *Raw Materials* |  | *2,000* |

1. **Direct Labour used in jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in Progress* | *15,000* |  |
|  | *Factory Payroll* |  | *15,000* |

1. **Indirect Labour used in jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Factory Overhead* | *1,000* |  |
|  | *Factory Payroll* |  | *1,000* |

1. **Factory overhead applied**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in Progress* | *15,000* |  |
|  | *Factory Overhead* |  | *15,000* |

1. **Jobs completed**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Finished Goods* | *27,000* |  |
|  | *Work in Progress* |  | *27,000* |

1. **Adjust under applied overhead**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Factory overhead* | *3,000* |  |
|  | *Cost of Goods sold* |  | *3,000* |

1. **Sale of goods**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Cost of Goods Sold* | *18,000* |  |
|  | *Finished Goods* |  | *18,000* |
|  | *Accounts Receivable* | *62,100* |  |
|  | *Sales* |  | *54,000* |
|  | *GST* |  | *8,100* |

**KITCHEN DESIGNE LTD – GENERAL LEDGER**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Raw Materials Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *20,000 dr* |
| *31/3/02* | | *Accounts Payable* | | *20,000* | |  | | *40,000 dr* |
|  | | *Work In Progress* | |  | | *10,000* | | *30,000 dr* |
|  | | *Factory Overhead Control* | |  | | *2,000* | | *28,000 dr* |
| **Factory Payroll Control Account** | | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | | |
| *1/3/02* | *Bank* | | *7,000* | |  | | *7,000 dr* | | |
|  | *Work In Progress* | |  | | *15,000* | | *8,000 cr* | | |
|  | *Factory Overhead Control* | |  | | *1,000* | | *9,000 cr* | | |
| **Factory Overhead Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *3,000 dr* |
| *31/3/02* | | *Raw Materials* | | *2,000* | |  | | *5,000 dr* |
|  | | *Factory Payroll* | | *1,000* | |  | | *6,000 dr* |
|  | | *Electricity* | | *1,000* | |  | | *7,000 dr* |
|  | | *Rates* | | *2,000* | |  | | *9,000 dr* |
|  | | *Repairs* | | *1,000* | |  | | *10,000 dr* |
|  | | *Depreciation* | | *2,000* | |  | | *12,000 dr* |
|  | | *Work In Progress* | |  | | *15,000* | | *3,000 cr* |
|  | | *Cost of Goods Sold* | | *3,000* | |  | | ***-*** |
| **Work In Progress Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *40,000 dr* |
| *31/3/02* | | *Raw Materials* | | *10,000* | |  | | *50,000 dr* |
|  | | *Factory Payroll* | | *15,000* | |  | | *65,000 dr* |
|  | | *Factory Overhead* | | *15,000* | |  | | *80,000 dr* |
|  | | *Finished Goods* | |  | | *27,000* | | *53,000 dr* |
| **Finished Goods Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *9,000 dr* |
| *31/3/02* | | *Work In Progress* | | *27,000* | |  | | *36,000 dr* |
|  | | *Cost Of Goods Sold* | |  | | *18,000* | | *18,000 dr* |
| **Cost of Goods Sold** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
| *1/3/02* | | *Balance* | |  | |  | | *100,000 dr* |
| *31/3/02* | | *Finished Goods* | | *18,000* | |  | | *118,000 dr* |
|  | | *Factory Overhead* | |  | | *3,000* | | *115,000 dr* |
| **Sales** | | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | | |
| *31/3/02* | *Accounts Receivable* | |  | | *54,000* | | *54,000 dr* | | |

JOB-ORDER COSTING EXERCISE (3)

Boat builders LTD manufacture a variety of boats to meet the specific requirements of their various customers.

The following information was provided to you about the firm:

* Overheads are allocated based on labour hours (budgeted overheads for the year are $300,000 and budgeted labour hours are 6,000)
* The firms charges a 100% mark-up on products sold
* At the end of the financial year (31 March) any over-applied or under-applied overhead is closed off to Cost of Goods Sold.

On March 1 2002, the following balances existed in the ledger accounts of Furniture Supplies LTD:

* Raw Materials Control $ 40,000
* Work in Progress Control $ 80,000
* Factory Overhead Control $ 6,000
* Finished Goods Control $ 18,000
* Cost of Goods Sold $200,000

During March the following transactions took place:

* Paid wages $30,000
* Purchases of Raw Materials on Credit amounted to $57,500 (including GST)
* Actual Overhead costs for the month ($1,000 electricity, $4,000 repairs and depreciation $30,000 – all excluding GST)
* Direct Raw Materials issued to jobs was $45,000
* Indirect Raw Materials issued were $3,000
* Direct Labour costs were ( 600hours) $28,000

# Indirect Labour costs were $2,000

* Boat with job number B1011 was the only work in progress at the start of the month. Additional costs of $10,000 were spent on this. It was completed and invoiced to the customer. There were other jobs in the factory still to be completed.

**Required:**

1. Complete the Selected General Journal Entries
2. Complete the selected General Ledger Accounts

**Boat Builders LTD - General Journal**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in progress* | *45,000* |  |
|  | *Raw Materials* |  | *45,000* |
|  | ***(Issues of direct materials)*** |  |  |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in Progress* | *28,000* |  |
|  | *Factory Payroll* |  | *28,000* |
|  | ***(Direct Labour used in jobs)*** |  |  |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Work in Progress* | *30,000* |  |
|  | *Factory Overhead* |  | *30,000* |
|  | ***(Factory overhead applied)*** |  |  |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Finished Goods* | *90,000* |  |
|  | *Work in Progress* |  | *90,000* |
|  | ***(Jobs completed)*** |  |  |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/3/02* | *Cost of Goods Sold* | *16,000* |  |
|  | *Factory Overhead* |  | *16,000* |
|  | ***(Adjust under applied overhead)*** |  |  |

**Boat Builders LTD - General Ledger**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factory Overhead Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *1/3/02* | *Balance* |  |  | *6,000 dr* |
| *31/3/02* | *Raw Materials* | *3,000* |  | *9,000 dr* |
|  | *Factory Payroll* | *2,000* |  | *11,000 dr* |
|  | *Electricity* | *1,000* |  | *12,000 dr* |
|  | *Repairs* | *4,000* |  | *16,000 dr* |
|  | *Depreciation* | *30,000* |  | *46,000 dr* |
|  | *Work In Progress* |  | *30,000* | *16,000 dr* |
|  | *Cost of Goods Sold* |  | *16,000* | *-* |
| **Work In Progress Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *1/3/02* | *Balance* |  |  | *80,000 dr* |
| *31/3/02* | *Raw Materials* | *45,000* |  | *125,000 dr* |
|  | *Factory Payroll* | *28,000* |  | *153,000 dr* |
|  | *Factory Overhead* | *30,000* |  | *183,000 dr* |
|  | *Finished Goods* |  | *90,000* | *93,000 dr* |
| **Finished Goods Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *1/3/02* | *Balance* |  |  | *18,000 dr* |
| *31/3/02* | *Work In Progress* | *90,000* |  | *108,000 dr* |
|  | *Cost Of Goods Sold* |  | *90,000* | *18,000 dr* |
| **Cost Of Goods Sold** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *1/3/02* | *Balance* |  |  | *200,000 dr* |
| *31/3/02* | *Finished Goods* | *90,000* |  | *290,000 dr* |
|  | *Factory Overhead* | *16,000* |  | *306,000 dr* |

JOB-ORDER COSTING EXERCISE (4)

1. Extreme sells mountain bikes that go through 3 departments. Job 118 had cost of $100 in the Parts Department transferred to the Assembly Department, where $300 costs are added. It’s then transferred to the testing department, where costs of $50 are added. It’s then transferred to finished goods. Complete the Journal entries:

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
|  | *Work in Progress – Assembly Department* | *100* |  |
|  | *Work in Progress – Parts Department* |  | *100* |
| *(Transfer of Work in progress from parts department to assembly department)* | | | |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
|  | *Work in Progress – Testing Department* | *400* |  |
|  | *Work in Progress – Assembly Department* |  | *4,00* |
| *(Transfer of Work in progress from assembly department to testing department)* | | | |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
|  | *Finished Goods* | *450* |  |
|  | *Work in Progress – Testing Department* |  | *450* |
| *(Transfer of Work in progress from testing department to finished goods)* | | | |

1. Fill in the missing Ledger entries (Indicated by the letters A – E)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Raw Materials Control Account** | | | | | | | | |
| **Date** | | **Particulars** | | **Debit** | | **Credit** | | **Balance** |
|  | | Balance | |  | |  | | 1,000 DR |
|  | | Accounts Payable (Bank) | | 3,000 | |  | | 4,000 DR |
| **A** | | *Work in progress* | |  | | *1,500* | | *2,500 DR* |
|  | | Factory Overhead Control | |  | | 500 | | 2,000 DR |
| **Factory Payroll Control Account** | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | |
|  | Bank | | 5,000 | |  | | 5,000 DR | |
| **E** | *Work in pROGRESS* | |  | | *3,500* | | *1,500 DR* | |
|  | Factory Overhead Control | |  | | 1,500 | | - | |
| **Factory Overhead Control Account** | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | |
|  | Raw Materials | | 500 | |  | | 500 DR | |
|  | Factory Payroll | | 1,500 | |  | | 2,000 DR | |
|  | Work In Progress | |  | | 3,000 | | 1,000 CR | |
| **B** | *Cost of Goods Sold* | | *1,000* | |  | | *-* | |
| **Work In Progress Control Account** | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | |
|  | Balance | |  | |  | | 4,000 DR | |
|  | Raw Materials | | 1,500 | |  | | 1,500 DR | |
|  | Factory Payroll | | 3,500 | |  | | 5,000 DR | |
| **D** |  | | *3,000* | |  | | *8,000 dr* | |
|  | Finished Goods | |  | | 6,000 | | 2,000 DR | |
| **Finished Goods Control Account** | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | |
|  | Balance | |  | |  | | 4,000 DR | |
|  | Work In Progress | | 6,000 | |  | | 10,000DR | |
| **C** | *Cost of Goods Sold* | |  | | *5,000* | | *5,000 DR* | |
| **Cost of Goods Sold** | | | | | | | | |
| **Date** | **Particulars** | | **Debit** | | **Credit** | | **Balance** | |
|  | Finished Goods | | 5,000 | |  | | 5,000 DR | |
|  | Factory Overhead | |  | | 1,000 | | 4,000 DR | |

***Extra Revision...***

What is the purpose of a Materials Requisition Form?

* *The Purpose of a Materials Requisition form is to issue and authorise the usage of materials for a particular job.*

Explain 1 control related to a Material Requisition Form?

* *They are signed (by someone with the authority to do so – e.g. store manager) so that raw materials are only issued to jobs when needed and to lessen the chance that they are used for personal use.*
* *Materials can only leave the warehouse/store with a materials requisition form – to lessen the chance that they are taken for personal use*

What is the purpose of a Time Sheet?

* *The Purpose of a time sheet is to record information about the time worked by employees. They are then used to allocate the cost of time worked on certain jobs to job cost sheets/work in progress.*

Explain what the main control related to a Time Sheet is?

* *The time sheets are authorised by a supervisor to see that the hours worked on a job are correct and that each job is allocated the correct amount of direct labour*
* *Time Sheets are matched with the hours allocated to all the jobs over a period (they should equal) to ensure that all cost have been correctly allocated.*

What is the purpose of a Job Cost Sheet?

* *The Purpose**of a* *job cost card is to accumulate costs related to each individual job. They are the subsidiary ledger records for Work in progress and Finished goods in the general ledger.*

Give two reasons why it is important to correctly allocate costs to jobs

* *To determine costs and therefore whether it is profitable to manufacture a certain type of product*
* *To assessing manufacturing performance*
* *To provide accurate quotes for customers*

Machine Hours and Direct Labour Hours are two costs bases for allocating Factory Overheads to Jobs. When is it most appropriate to use each of these:

***Machine Hours***

* *Machine hours best reflects the consumption of overheads in that business, because it is the main driver (incurs the most factory overhead) (A/M).*
* Ina machine-intensive process a machine hour rate is most appropriate as most of the maintenance on the machine and power used on the machine (overheads) is related to the number of hours it is used **(M/E).**

***Direct Labour Hours***

* Direct Labour hours best reflects the consumption of overheads in that business, because it is the main driver (incurs the most factory overhead) (A/M).
* Ina labour-intensive process a labour hour rate is most appropriate as most of the overhead incurred results form the labour effort of workers **(M/E).**

Explain why under-applied overhead or over-applied overhead occurs.

* *As overhead is allocated to jobs based on budgeted figures at the beginning of the period it is unlikely that these figures will be exactly the same as the actual figures. …Thus the budgeted overhead rate applied will result in a different amount of overhead applied than what was actually incurred so there will be over/under-applied overhead (E).*
* *If the actual factory overhead is greater than the factory overhead applied then there is an under provision of factory overhead (and vice versa) (A).*

Explain the treatment of under or over applied overhead and the affect that this has.

***Under Applied***:

* *Under applied overhead is closed from the factory overhead control account to the cost of goods sold for a business that produces a good. This will increase the figure reported in the cost of goods sold ledger*

***Over Applied***

* *Over applied overhead is closed from the factory overhead control account to the cost of goods sold for a business that produces a good. This will decrease the figure reported in the cost of goods sold ledger.*

**Prepare Accounting Entries:**

Scary Fairytales Ltd is a small manufacturing business that hand writes and binds Hard Covered Fairytale books to various wealthy families worldwide. The books are hand written and are about the children of the parents, or people who request the books. When people request the books, they give details about the likes, dislikes, a description etc of the people that the book is for. The children are the main characters in the book. Each Story is different (which takes a considerable amount of time and imagination to do). The cover is made out of native timber, with the title engraved using a chisel. Colour throughout the books is then added, as are personalised requirements and pictures requested by the customer. The books are bound by the one machine that the business owns (a binding machine). This process only takes a few minutes, but each book takes a long time to make. Scary Fairytales Ltd adds a 300% mark-up to the price of their books.

The information below relates to production during the month of October 2005:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Customer** | **Job #** | **Balance**  **1.10.05** | **Materials Issued** | **Direct**  **Labour**  **Hours** | **Labour**  **Costs** | **Date Completed** | **Date Delivered** |
| A. Men | 2111 | 1,000 |  | 10 | 400 | 10.10.05 | 10.10.05 |
| C. Dem | 2112 | 2,000 |  | 5 | 200 | 15.10.05 | 17.10.05 |
| E. Fort | 2113 |  | 100 | 20 | 800 | 17.10.05 | 20.10.05 |
| F. Ert | 2114 |  | 200 | 30 | 1,200 |  |  |
| G. Rate | 2115 |  | 50 | 10 | 400 |  |  |
| P. Ore | 2116 |  | 400 | 15 | 600 |  |  |
| Total |  | $3,000 | $750 | 90 | $3,600 |  |  |

**Additional Information:**

* Purchases of materials during the month amounted to $2,300 (including GST) during the month
* Indirect materials issued to production during the month amounted to $500 (excluding GST)
* Wages paid during the month were $3,800 (which included $200 paid to the factory cleaner who came in for one hour at the end of the day)
* Manufacturing overheads during the month amounted to $2,000.
* Overhead is applied based on direct labour hours. Overhead was budgeted at $24,000 and direct labour hours were budgeted at 1,200.
* Finished goods consisted of Job # 2110 which was delivered to customers on 08.10.05.

**Required:**

**A. Calculate the overhead rate (show your workings).**

*$24,000/1,200 = $20 per direct labour hour*

**B. Complete the following ledger accounts:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Raw Materials Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| 1/10/05 | Balance |  |  | 500dr |
| *31/10/05* | *Accounts Payable* | *2,000* |  | *2,500 dr* |
|  | *Work in Progress* |  | *750* | *1,750 dr* |
|  | *Factory Overhead* |  | *500* | *1,250 dr* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factory Payroll Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *31/10/05* | *Bank* | *3,800* |  | *3,800 dr* |
|  | *Work in Progress* |  | *3,600* | *200 dr* |
|  | *Factory Overhead* |  | *200* | *-* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Factory Overhead Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *31/10/05* | *Factory Expenses* | *2,000* |  | *2,000 dr* |
|  | *Work in Progress* |  | *1,800* | *200 dr* |
|  | *Raw Materials* | *500* |  | *700 dr* |
|  | *Factory Payroll* | *200* |  | *900 dr* |
|  | *Cost of Goods Sold* |  | *900* | *-* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Work In Progress Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| 1/10/05 | Balance |  |  | 3,000dr |
| *31/10/05* | *Raw Materials* | *750* |  | *3,750* |
|  | *Factory Payroll* | *3,600* |  | *7,350 dr* |
|  | *Factory Overhead* | *1,800* |  | *9,150 dr* |
|  | *Finished Goods* |  | *5,200* | *3,950 dr* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Finished Goods Control Account** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| 1/10/05 | Balance |  |  | 1,500dr |
| *31/10/05* | *Work in Progress* | *5,200* |  | *6,700 dr* |
|  | *Cost of Goods Sold* |  | *6,700* | *-* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cost Of Goods Sold** | | | | |
| **Date** | **Particulars** | **Debit** | **Credit** | **Balance** |
| *31/10/05* | *Finished Goods* | 6,700 |  | 6,700 dr |
|  | *Factory Overhead* | 900 |  | 7,600 dr |
|  |  |  |  |  |

**C. Prepare the following journal entries**

1. **Purchase of raw materials on credit**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Raw Materials* | *2,000* |  |
|  | *GST* | *300* |  |
|  | *Accounts Payable* |  | *2,300* |

1. **Issues of direct materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Work In Progress* | *750* |  |
|  | *Raw Materials* |  | *750* |

1. **Issue of Indirect materials**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Factory Overhead* | *500* |  |
|  | *Raw Materials* |  | *500* |

1. **Direct Labour used in jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Work in Progress* | *3,600* |  |
|  | *Factory Payroll* |  | *3,600* |

1. **Indirect Labour used in jobs**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Factory Overhead* | *200* |  |
|  | *Factory Payroll* |  | *200* |

1. **Factory overhead applied**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Work in Progress* | *1,800* |  |
|  | *Factory Overhead* |  | *1,800* |

1. **Jobs completed**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Finished Goods* | *5,200* |  |
|  | *Work in progress* |  | *5,200* |

1. **Adjust overhead (under-applied or over-applied)**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Cost of Goods Sold* | *900* |  |
|  | *Factory Overhead* |  | *900* |

1. **Sale of goods**

|  |  |  |  |
| --- | --- | --- | --- |
| **DATE** | **PARTICULARS** | **DEBIT** | **CREDIT** |
| *31/10/05* | *Cost of Goods Sold* | *6,700* |  |
|  | *Finished Goods* |  | *6,700* |
|  | *Sales* |  | *26,800* |
|  | *GST* |  | *4020* |
|  | *Accounts Receivable* | *30,820* |  |

**D. Complete the Job Cost Card for Job Number 2113**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Scary Fairy Tales LtdJob Card | | | | | | |
| **Job Number: *2113*** | | | **Description: *E. FORT - BOOK*** | | | |
| **Date Started:*???*** | | | **Date Completed:** *17/10/05* | | | |
| **Date** | **Raw Materials** | | **Labour** | | **Factory Overhead** | |
|  | **Materials Requisition number** | **Amount** | **Hours** | **Amount** | **Overhead rate** | **Amount** |
| ***???*** | ***???*** | *100* | *20* | *800* | *20/dlh* | *400* |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Total** |  | ***100*** | ***20*** | ***800*** | ***20*** | ***400*** |
| **Total Cost of Job $ *1,300*** | | | | | | |

**E. Complete the Invoice for Job Number 2113**

|  |  |  |
| --- | --- | --- |
| **Scary Fairy Tales LTD Tax Invoice 1234**  **Address:** 221Main Road Stoke, Nelson **GST No. 22-333-555** | | |
| **Invoice To: *E. Fort* Date: *17/10/2005***  **Customer Order Number: 7659** | | |
| **Description** | **Quantity** | **Amount** |
| Book | 1 | $5,200 |
|  |  |  |
| **Sub Total**  **GST**  **Total** | | 5,200 |
| 780 |
| $5,980 |

