Manufacturing business

Questions and Answers (A level)

Question 1

May June 2019

L plc is a manufacturing business. The total prime cost for the year ended 31 December 2017 was $350 000.

The following selected balances were extracted from the company's books of account at 31 December 2018.

	$000
Indirect wages	100
General expenses	64
Power	36
Factory plant	
Cost	600
Accumulated depreciation at 1 January 2018	150
Inventory	
Work in progress at 1 January 2018	23

The following information is available at 31 December 2018.

1 The prime cost for the year was 10% greater than the previous year.

2 Indirect wages are to be apportioned between the factory and office in the ratio 2 : 3 respectively.

3 General expenses of $6000 were prepaid. General expenses are to be apportioned equally between the factory and the office.

4 A power bill of $4000 remained unpaid. 60% of the total power expense is charged to the factory.

5 The value of work in progress was $31 000.

The following information is also available for the year ended 31 December 2018.

1 A new item of factory plant was acquired on 31 October 2018 at a cost of $30 000. This transaction has not been recorded in the books of account.

Factory plant is depreciated at 25% per annum using the reducing balance method. A full year's depreciation is charged on assets acquired during the year.

2 Goods are transferred to the sales department at a mark-up of 20%.

Answer the following questions in the Question Paper. Questions are printed here for reference only.

(a) Explain what is meant by:

(i) prime cost [2]

(ii) work in progress. [2]

Additional information

After the draft statement of financial position had been prepared it was noted that the inventory value of finished goods was $33 000. This was the value at which these goods had been transferred from the manufacturing account.

(c) Discuss whether the inventory should have been included at this value. Justify your answer by referring to relevant accounting concepts and appropriate calculations. [8]

[Total: 25]

<table>
<tr><th>Question</th><th>Answer</th><th>Mark</th></tr>
<tr><td>1(a)(i)</td><td>Prime cost is the direct (1) cost of a manufactured product. It is the total of direct materials, direct labour and direct overheads/expenses. (1)</td><td></td></tr>
<tr><td>1(a)(ii)</td><td>Units of production which are only part completed (1) with regard to materials and / or labour. (1)</td><td></td></tr>
<tr><td>1(b)</td><td>
Manufacturing Account
For the year ended 31 December 2018
<table>
<tr><td></td><td></td><td></td><td>$000</td><td></td></tr>
<tr><td>Prime cost</td><td></td><td></td><td>385</td><td>(1)</td></tr>
<tr><td>Add:</td><td></td><td></td><td></td><td></td></tr>
<tr><td>Indirect wages</td><td>40</td><td>(1)</td><td></td><td></td></tr>
<tr><td>General expenses</td><td>29</td><td>(2) W1</td><td></td><td></td></tr>
<tr><td>Power</td><td>24</td><td>(2) W2</td><td></td><td></td></tr>
<tr><td>Depreciation</td><td>120</td><td>(2) W3</td><td>213</td><td></td></tr>
<tr><td></td><td></td><td></td><td>598</td><td></td></tr>
<tr><td>Add: opening work-in-progress</td><td></td><td></td><td>23</td><td>(1)</td></tr>
<tr><td></td><td></td><td></td><td>621</td><td></td></tr>
<tr><td>Less: closing work-in-progress</td><td></td><td></td><td>(31)</td><td>(1)</td></tr>
<tr><td>Cost of production</td><td></td><td></td><td>590</td><td>(1) OF</td></tr>
<tr><td>Factory profit/mark-up</td><td></td><td></td><td>118</td><td>(1) OF</td></tr>
<tr><td>Transferred to income statement</td><td></td><td></td><td>708</td><td>(1) OF</td></tr>
</table>
W1 General expenses 64 – 6 = 58 (1) × 50% = 29 (1) OF
W2 Power 36 + 4 = 40 (1) × 60% = 24 (1) OF
W3 Depreciation 450 × 25% = 112.5 (1)
30 × 25% = 7.5 (1)
120.0
</td><td>1</td></tr>
</table>

Question	Answer	Marks
1(c)	The inventory should not have been included at that figure **(1)** because the figure contains unrealised / factory profit. **(1)** Realisation concept **(1)** – transaction is accounted for when converted into money. **(1)** Prudence concept **(1)** – inventory and profit should not be overstated/inventory valued at lower of cost and NRV per IAS 2. **(1)** Correct value should be $\$33\,000 \times \frac{100}{120}$ **(1)** = $27 500 **(1)** **or** $33 000 – $5500 **(1)** = $27 500 **(1)** The value after reduction of the unrealised profit is the value to be shown in the statement of financial position. **(1)** A provision for unrealised profit is created **(1)** **Max 2** for concept identification; **Max 2** for calculation; **Max 3** for explanation and **1 mark** for correct decision.	8

Question 2

March 2018

Marco manufactures garden chairs. He transfers all finished goods from the factory at cost plus 25%.

The following selected balances are available for the year ended 31 January 2018:

	$000
Carriage inwards	12
Carriage outwards	24
Heating and lighting	70
Inventories at 1 February 2017	
Raw materials	40
Work in progress	60
Finished goods at transfer price	132
Machinery	
Cost	640
Accumulated depreciation	200
Office equipment at cost	110
Office salaries	190
Purchase of raw materials	568
Rent and rates	133
Returns inwards	5
Returns outwards	23
Revenue	1920
Wages	520

The following additional information is available.

1 Inventories at 31 January 2018 were:

	$
Raw materials	42000
Work in progress	80000
Finished goods at transfer price	150000

2 Depreciation is to be charged as follows:

machinery 15% per annum using the reducing balance method
office equipment 5% per annum using the straight-line method.

3 Rent and rates have not been adjusted for $7000 owing at 1 February 2017 and $6000 paid in advance at 31 January 2018. Rent and rates are apportioned 60% to the factory and 40% to administration.

4 Heating and lighting are apportioned 80% to the factory and 20% to administration.

5 At 31 January 2018 wages due but unpaid were $10000. Wages are apportioned 50% direct factory wages, 30% indirect factory wages and 20% administrative wages.

Answer the following questions in the Question Paper. Questions are printed here for reference only.

(a) Prepare the manufacturing account for Marco for the year ended 31 January 2018. [12]

(b) Prepare an extract from the statement of financial position at 31 January 2018 to show how inventories are recorded. [3]

(c) State **two** accounting concepts relating to the provision for unrealised profit. [2]

(d) **(i)** Explain why it is important for Marco to create a provision for unrealised profit. [4]

(ii) Analyse the effect on profit if Marco does **not** create a provision for unrealised profit. [4]

[Total: 25]

Question	Answer	Marks
1(a)	Manufacturing Account for Marco for year ended 31 January 2018	12

	$	$	
Opening inventory of raw materials		40 000	
Purchases of raw materials	568 000		
Carriage inwards	12 000		**(1)**
Returns outward	(23 000)		**(1)**
Net purchases		557 000	
		597 000	
Closing inventory of raw materials		(42 000)	**(1) both**
Cost of raw materials consumed		555 000	
Direct factory wages		265 000	**(1)**
Prime cost		820 000	**(1) OF**
Factory overheads			
Indirect factory wages	159 000		**(1)**
Heating and lighting	56 000		**(1)**
Machinery depreciation	66 000		**(1)**
Rent and rates	72 000	353 000	**(1)**
		1 173 000	
Opening work in progress	60 000		
Closing work in progress	(80 000)	(20 000)	**(1) both**
Cost of production		1 153 000	
Factory profit		288 250	**(1) OF**
Transfer price		1 441 250	**(1) OF**

Question	Answer	Marks
1(b)	Extract from statement of Financial Position for Marco at 31 January 2018	3

	$	$	
Current assets **(1)**			
Inventories			
Raw materials		42 000	
Work in progress		80 000	
Finished goods	150 000		
Less provision for unrealised profit	(30 000)	120 000	**(1)**
		242 000	**(1) OF**

Question	Answer	Marks
1(c)	Realisation concept **(1)** Prudence concept **(1)**	2
1(d)(i)	It is important that Marco creates a provision for unrealised profit because: IAS2 states that inventory is valued at the lower of cost and net realisable value, so unrealised profit should be removed from the inventory valuation otherwise profits **(1)** and current assets **(1)** will be overvalued. Realisation concept states that revenue should only be recorded in the business books of account when the goods have been sold for credit or cash**(1)** and prudence concept states that losses should be provided for as soon as they are anticipated but profits are not recorded until realised **(1)**	4
1(d)(ii)	Profit will be greater by $30 000 **(1)** if there is no provision for unrealised profit. However this profit is overstated **(1)** as the inventories have not been adjusted for unrealised profit. **(1)** Any decision based on these levels of profit would be based on expectations of a higher profit which may not be achieved **(1)**	4

Question 3

October 2018

It is considered useful for a business to record all its manufacturing costs separately in a manufacturing account.

Answer the following questions in the Question Paper. Questions are printed here for reference only.

(a) State **three** reasons why it is useful to a business to record its manufacturing costs in this way. [3]

Additional information

HT Limited is a manufacturing business that makes a single product. It provided the following information.

1 Factory profit had been accounted for at 20% on cost for some years.

2 The company earned a uniform gross margin of 40%.

3 Sales for the year ended 31 December 2017 amounted to $800 000.

4 The provision for unrealised profit account for the year ended 31 December 2017 was as follows:

Provision for unrealised profit account

2017		$	2017		$
Dec 31	Balance c/d	12 000	Jan 1	Balance b/d	10 000
			Dec 31	Income statement	2 000
		12 000			12 000
			2018		
			Jan 1	Balance b/d	12 000

(b) Prepare the trading account section of the income statement of the company for the year ended 31 December 2017. [5]

Additional information

The following information was also available for the year ended 31 December 2017.

1 Prime costs were $250 000.

2 The value of work in progress decreased by $10 000.

(c) Prepare a summarised manufacturing account for the year ended 31 December 2017. This account should include a **total** for factory overheads. [6]

Additional information

Administrative expenses and distribution costs were $148 000 and $72 000 respectively.

(d) Prepare a statement to calculate the profit for the year ended 31 December 2017. [6]

Additional information

The machinery in the factory is depreciated at the rate of 25% per annum using the reducing balance method. It currently has a net book value of $85 000.

The directors are considering replacing all the old machinery with new machinery costing $160 000. The new machinery, if purchased, would cause direct labour costs to fall by $14 000 a year.

(e) Advise the directors whether or not they should proceed with the purchase of the new machinery. Justify your answer. [5]

[Total: 25]

Question	Answer	Marks
1(a)	Possible answers: It enables the total cost of manufacture/cost of goods produced to be known. **(1)** It enables factory profit to be calculated as a profit centre. **(1)** It enables the cost of 'buying-in'/market price to be compared with the cost of manufacture. **(1)** It helps to identify factory and office costs. **(1)** It identifies the factory as a responsibility / cost centre for performance evaluation. **(1)** It helps in setting prices. **(1)** Max 3 for **(1) mark** each.	3
1(b)	HT Limited Income Statement for the year ended 31 December 2017 <table><tr><td></td><td>$</td><td></td><td>$</td><td></td></tr><tr><td>Revenue</td><td></td><td></td><td>800 000</td><td></td></tr><tr><td>Finished goods at 1 January 2017</td><td>60 000</td><td>**(1)**</td><td></td><td></td></tr><tr><td>Cost of production (balancing figure)</td><td>492 000</td><td>**(1) OF**</td><td></td><td></td></tr><tr><td></td><td>552 000</td><td></td><td></td><td></td></tr><tr><td>Finished goods at 31 December 2017</td><td>72 000</td><td>**(1)**</td><td></td><td></td></tr><tr><td>Cost of sales</td><td></td><td></td><td>480 000</td><td>**(1)**</td></tr><tr><td>Gross profit</td><td></td><td></td><td>320 000</td><td>**(1)**</td></tr></table>	5

Question	Answer			Marks
1(c)	HT Limited Manufacturing Account for the year ended 31 December 2017			6
			$	
	Prime cost		250 000 **(1)**	
	Factory overheads (balancing figure)		150 000 **(1) OF**	
			400 000	
	Work in progress		10 000 **(1)**	
	Cost of production at cost price		410 000 **(1) OF**	
	Factory profit ($\frac{1}{6}$ of total COP)		82 000 **(1) OF**	
	Cost of production at transfer price (from **(b)**)		492 000 **(1) OF**	
1(d)		$	$	6
	Gross profit (from **(b)**)		320 000 **(1) OF**	
	Factory profit (from **(c)**)		82 000 **(1) OF**	
	Increase in provision for unrealised profit	2 000 **(1)**		
	Administrative expenses	148 000 **(1)**		
	Distribution costs	72 000 **(1)**	222 000	
	Profit for the year		180 000 **(1) OF**	

Question	Answer	Marks
1(e)	The increase in depreciation **(1)** in the first year would be (160 000 – 85 000) · 0.25 = $18 750 **(1)** which is more **(1)** than the decrease in labour costs. In future years the increase in depreciation will become smaller **(1)** and so in future years the savings in labour costs might be more than the increase in depreciation. **(1)** The directors may need to consider financing if there is insufficient cash **(1)** and interest payable could be an additional cost. **(1)** The new equipment could be more reliable/efficient/productive **(1)** leading to a reduction in the cost of repairs/less wastage. **(1)** Staff training might need to be paid for. **(1)** **Accept other valid points.** **1 mark** for advice + **Max 4 marks** for comments	5