Practice Assessment: Questions

Task 1: Inventory control

The following information is available for product ZYQ:
Annual demand – 1,250,000 kilograms
Annual holding cost per kilogram - £5
Fixed ordering cost - £2

(a) Calculate the Economic Order Quantity (EOQ) for ZYQ.
The inventory record shown below for product ZYQ for the month of April has only been fully completed for the first three weeks of the month.

(b) Complete the entries in the inventory record for the two receipts on 24 and 28 April that were ordered using EOQ method.

(c) Complete ALL entries in the inventory record for the two issues in the month and for the closing balance at the end of April using the AVCO method of issuing inventory.

Inventory record for product ZYQ. (Show the costs per kilogram (kg) in £ to 3 decimal places, and the total costs in whole £.)

	Receipts			*Issues*			*Balance*	
Date	Qty (kg)	Cost per kg (kg)	Total cost (£)	Qty (kg)	Cost per kg (£)	Total cost (£)	Qty (kg)	Total cost (£)
Balance as at 22 April							900	1,125
24 April		1.275						
26 April				800				
28 April		1.475						
30 April				750				

(d) Using the FIFO method, the issue of 800kg of ZYQ on 26 April would have been valued at a total amount of _____?

(e) Using the LIFO method, the issue of 800kg of ZYQ on 26 April would have been valued at a total amount of _____?

Task 2: Cost accounting journals
What are the correct entries into the journal below to record the following FOUR accounting transcations?

1. Receipt of ZYQ into inventory paying on credit.
2. Issue of ZYQ from inventory to production.
3. Receipt of ZYQ into inventory paying immediately by BACS.
4. Return of ZYQ from production to inventory.

The choices are:

- Dr. Bank, Cr. Inventory
- Dr. Trade Payables' Control, Cr. Inventory
- Dr. Inventory, Cr. Bank
- Dr. Inventory, Cr. Trade Payables' Control
- Dr. Inventory, Cr. Production
- Dr. Production, Cr. Inventory

Transaction 1	
Transaction 2	
Transaction 3	
Transaction 4	

Task 3: Calculation of direct labour costs
Below is a weekly timesheet for one of Icon Ltd's employees, who is paid as follows:
1. For a basic six-hour shift every day from Monday to Friday – basic pay.
2. For any overtime in excess of the basic six hours, on any day from Monday to Friday- the extra hours are paid at time-and-a-half (basic pay plus an overtime premium which is half of the basic pay rate, equals to total pay).
3. For three contracted hours each Saturday morning – basic pay.
4. For any hours in excess of three hours on Saturday – the extra hours are paid at double time (basic pay plus an overtime premium equals to total pay).
5. For any hours worked on Sunday – paid at double time.

Complete the columns headed Basic pay, Overtime premium and Total pay. (Notes: Zero figures should be entered in cells where appropriate; Overtime pay is the premium amount paid for the extra hours worked). Employee's weekly timesheet for the week ending 7 April.

Employee: G. Michael			Cost Centre : Assembly; Basic pay per hour: £12.00			
	Hours spent on production	Hours worked on indirect work	Notes	Basic pay (£)	Overtime premium (£)	Total pay (£)
Monday	6	2	10am- 12am cleaning of machinery			
Tuesday	2	4	9am-1pm customer care course			
Wednesday	8					
Thursday	6					
Friday	6	1	3-4pm health and safety training			
Saturday	6					
Sunday	3					
Total	37	7				

Task 4: Overhead allocation and apportionment

Icon Ltd's budgeted overheads for the next financial year are:

	£	£
Depreciation of machinery		974,850
Power for machinery		541,000
Rent and rates		105,000
Light and heat		21,210
Indirect labour costs:		
Maintenance	101,150	
Stores	36,050	
Administration	240,100	
Total indirect labour cost		377,300

The following information is also available:

Department	Net book value of machinery	Machinery power usage (KwH)	Floor space (square metres)	Number of employees
Assembly	4,200,000	298,800	10,000	15
Finishing	1,800,000	199,200	9,000	10
Maintenance			6,000	4
Stores			5,800	3
Administration			4,200	8
Total	6,000,000	498,000	35,000	40

Overheads are allocated or apportioned on the most appropriate basis. The total overheads of the support cost centres are then reapportioned to the two production centres using the direct method.

- 78% of the maintenance cost centre's time is spent maintaining machinery in the Assembly and the remainder in the Finishing.
- The stores cost centre makes 70% of its issues to the Assembly, and 30% to the Finishing.
- Administration supports the two production centres equally.
- There is no reciprocal servicing between the three support cost centres

Complete the apportionment table below using the data above.

	Basis	Assembly (£)	Finishing (£)	Maint'ce (£)	Stores (£)	Admin (£)	Total (£)
Depreciation of machinery							
Power for machinery							
Rent and rates							
Light and heat							
Indirect labour							
Totals							
Reapportion Maintenance							
Reapportion Stores							
Reapportion Admin							
Total overheads to production centres							

Task 5: Overhead absorption/ Choice of costing principles

Next quarter Icon Ltd's budgeted overheads and activity levels are:

	Assembly	*Finishing*
Budgeted overheads (£)	147,224	62,900
Budgeted direct labour hours	16,358	10,483
Budgeted machine hours	5,258	3,700

(a) What would be the budgeted overhead absorption rate for each department if this were set based on their both being heavily automated?

A Assembly £28/hour, Finishing £17/hour
B Assembly £9/hour, Finishing £17/hour
C Assembly £9/hour, Finishing £6/hour
D Assembly £28/hour, Finishing £6/hour

(b) What would be the budgeted overhead absorption rate for each department if this were set based on their both being labour intensive?

A Assembly £28/hour, Finishing £17/hour
B Assembly £9/ hour, Finishing £17/hour
C Assembly £9/hour, Finishing £6/hour
D Assembly £28/hour, Finishing £6/hour

Additional data

At the end of the quarter actual overheads incurred were found to be:

	Assembly	*Finishing*
Actual overheads (£)	152,841	61,100

(c) Assuming that exactly the same amount of overheads was absorbed as budgeted in "a and b" above, what were the budgeted under or over absorption in the quarter?

A Assembly over absorbed £5,617, Finishing over absorbed £1,800
B Assembly over absorbed £5,617, Finishing under absorbed £1,800
C Assembly under absorbed £5,617, Finishing under absorbed £1,800
D Assembly under absorbed £5,617, Finishing over absorbed £1,800

Task 6: Activity effects/ segmental reporting

Icon Ltd has prepared a forecast for the next quarter for one of its small wooden parts, ZYG. This component is produced in batches and the forecast is based on selling and producing 1,500 batches.

One of the customers of Icon Ltd has indicated that it may be significantly increasing its order level for component ZYG for the next quarter and it appears that activity levels of 1,800 batches and 2,000 batches are feasible.

The semi-variable costs should be calculated using the high-low method. If 3,000 batches are sold the total semi-variable cost will be £14,000, and there is a constant unit variable cost up to this volume.

Complete the table below and calculate the estimated profit per batch of ZYG at the different activity levels.

Batches produced and sold	1,500	1,800	2,000
	£	£	£
Sales Revenue	45,000		
Variable costs:			
Direct materials	7,500		
Direct labour	9,000		
Overheads	6,000		
Semi-variable costs:	11,000		
Variable element			
Fixed element			
Total cost	33,500		
Total profit	11,500		
Profit per batch (to 2 decimal places)	7.67		

Task 7: Break-even (C-V-P) analysis
Product ZYQ has a selling price of £52 per unit with a total variable cost of £38 per unit. Icon Ltd estimates that the fixed costs per quarter associated with this product are £84,000.

(a) Calculate the budgeted breakeven, in units, for product ZYQ.

(b) Calculate the budgeted breakeven, in £, for product ZYQ.

(c) Complete the table below to show the budgeted margin of safety in units, and the margin of safety percentage if Icon Ltd sells 8,000 units or 9,000 units of product ZYQ.

Units of ZYQ sold	8,000	9,000
	£	£
Margin of safety (units)		
Margin of safety percentage		

(d) If Icon Ltd wishes to make a profit of £21,000, how many units of ZYQ must it sell?

(e) If Icon Ltd increases the selling price of ZYQ by £1, what will be the impact on the breakeven point and the margin of safety, assuming no change in the number of units sold?

A The breakdown point will decrease and the margin of safety will increase.
B The breakdown point will stay the same but the margin of safety will decrease.
C The breakdown point will decrease and the margin of safety will stay the same.
D The breakdown point will increase and the margin of safety will decrease.

Task 8: Types of costing systems/ Limiting factor decision making
The Finishing department of Icon Ltd uses process costing for some of its products.

The process account for April for one particular process has been partly completed but the following information is also relevant:

- Two employees worked on this process during April. Each employee worked 38 hours per week for 4 weeks and was paid £9 per hour.
- Overheads are absorbed on the basis of £14 per labour hour.
- Icon Ltd expects a normal loss 4% during this process, which it then sells for scrap at 50p per kg.

(a) Complete the process account below for April.

Description	Kg	Unit cost (£)	Total cost (£)		Description	Kg	Unit cost (£)	Total cost (£)
Material ZY1	400	1.66			Normal loss		0.50	
Material ZY2	300	1.50			Output	850		
Material ZY3	200	0.60						
Labour								
Overheads								

(b) Identify the correct entry for each of the following in a process account.

	Debit	Credit
Abnormal loss		
Abnormal gain		

Task 9: Variance analysis

Icon Ltd has the following original budget and actual performance for product ZYG for the year ending 31 April.

	Budget	Actual
Volume sold	10,000	12,000
	£000	£000
Sales revenue	2,000	2,500
Less costs:		
Direct materials	350	415
Direct labour	400	470
Overheads	980	1,180
Operating profit	270	435

Both direct materials and direct labour are variable costs, but the overheads are fixed.

Complete the table below to show a flexed budget and the resulting variances against this budget for the year. Show that actual variance amount, for sales and each cost, in the column headed 'Variance' and indicate whether this is Favourable (F) or Adverse (A) by entering F or A in the final column. If neither F nor A, enter 0.

	Flexed	Actual	Variance	F/ A
Volume sold		12,000		
	£000	£000	£000	
Sales revenue		2,500		
Less costs:				
Direct materials		415		
Direct labour		435		
Overheads		1,180		
Operating profit		470		

Task 10: Capital investment appraisal

One of the painting machines in the Finishing department is nearing the end of its working life and Icon Ltd is considering purchasing a replacement machine.

Estimates have been made for the initial capital cost, sales income and operating costs of the replacement machine, which is expected to have a working life of three years:

	Year 0 £000	Year 1 £000	Year 2 £000	Year 3 £000
Capital expenditure	1,900			
Other cash flows:				
Sales income		1,620	1,860	2,300
Operating costs		1,120	1,150	1,190

The company appraises capital investment projects using a 15% cost of capital.

(a) Complete the table below and calculate the net present value of the proposed replacement machine (to the nearest £000).

	Year 0 £000	Year 1 £000	Year 2 £000	Year 3 £000
Capital expenditure				
Sales income				
Operating costs				
Net cash flows				
PV factors	1.0000	0.8696	0.7561	0.6575
Discounted cash flow				
Net present value				

The net present value is **positive / negative.**

(b) Calculate the payback of the proposed replacement machine to the nearest whole month.

The payback period is _____ Year(s) and _____ Months