

Answer ALL questions.

- 1 Dual Products Ltd, which manufactures two products (Product P and Product Q), produces its budgets on a weekly basis. Each product contains two ingredients (Ingredient A and Ingredient B), which are mixed together in the manufacturing process. The finished products contain the following ingredient proportions by weight.

Product	Ingredient A	Ingredient B
P	20%	80%
Q	25%	75%

Both products are manufactured in batches of 20 units and the finished weight of each batch is expected to be:

Product P	8 kg
Product Q	12 kg

During the manufacturing process Ingredient A is subject to a 20% weight loss where as Ingredient B suffers no weight loss.

The following budgeted production has been scheduled for week 5.

Product	Mon	Tues	Weds	Thurs	Fri
P (units)	300	500	600	400	300
Q (units)	240	360	400	400	120

Ingredient A is ordered weekly in advance, for a daily just-in-time delivery on the morning of the day of manufacture. No stock of this ingredient is kept.

Ingredient B is ordered weekly in advance. The complete week's order being delivered on Monday morning. The company keeps a stock level, at the end of the week, equivalent to 25% of the week's consumption.

Stock of Ingredient B at the start of week 5 is 350 kg.

Required

- (a) Determine, for week 5, the budgeted purchase order quantity for both Ingredient A and Ingredient B (13)
- (b) Determine, for week 5, the budgeted daily delivery schedule for Ingredient A. (3)
- (c) (i) Identify two principles of a just-in-time approach to stock management. (2)
- (ii) Identify two implications for a company of using a just-in-time approach to stock management. (2)

(Total for Question 1 = 20 marks)

2 Sole Product Ltd manufactures and sells a single product. The product is produced in two departments (machining and finishing) before being packed into boxes in the dispatch department. The company has provided the following budgeted information.

Direct material		£4.50 per unit
Direct labour		
Machining department (per 100 units) at £10.00 per hour		5 hours
Finishing department (per 20 units) at £12.00 per hour		4 hours
Dispatch department labour (per 20 units packed) at £10.00 per hour		1 hour
Packing boxes		£0.50 each
Fixed overheads (if absorption costing is applied)		
Machining department	Absorbed at a rate of £15 per machine hour	
	(The manufacture of a batch of 100 units takes 5 machine hours.)	
Finishing department	Absorbed at a rate of £12 per direct labour hour	
Dispatch department	Absorbed at a rate of £1 per unit packed	

The selling price is £20 per unit.

Planned production and sales for the next period are as follows.

Production	2,000 units
Sales	1,500 units

There is no stock of packed or unpacked products, direct material or packing boxes at the beginning of the period.

At the end of the period it is expected to have no stock of packing boxes and 400 units unpacked in the dispatch department.

All other production in the period will be packed.

Required

- (a) Calculate the number of units completed and packed in the period. (3)
- (b) Produce a budgeted Manufacturing and Trading Account for the period using:
- (i) absorption costing (10)
- (ii) marginal costing. (7)

(Total for Question 2 = 20 marks)

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- 3 The Budget Boot company operates a chain of footwear shops that sell different types of boot, all with identical selling prices and unit costs. Each shop has a manager, who is paid a fixed salary, and sales assistants, who receive a fixed salary plus a sales commission.

The company is considering opening another shop that would be expected to have the following costs for the next period.

Purchase cost of boots	£11.00 per pair
Salaries (including commission)	£54,000
Rent	£25,000
Other fixed cost	£5,000

Commission to sales assistants to be paid at the rate of 5% of sales revenue.

For the next period the shop is expected to sell 20,000 pairs of boots at a selling price of £20 per pair:

Required

- (a) Calculate for the period:

- (i) the break-even point (in sales units)
- (ii) the margin of safety as a percentage of expected sales
- (iii) the profit.

(7)

The company is also considering discontinuing the sales commission and increasing the total sales assistants' salaries by £17,000 for the next period.

- (b) Advise the company as to the level of sales, for the new shop for the next period, at which this change to the salary structure is worthwhile.

All calculations must be shown.

(5)

- (c) Draw a single profit-volume chart, for the new shop for the next period showing the profit arising if the salary structure included:

- (i) commission paid to sales assistants
- (ii) no commission paid to sales assistants.

Clearly show on the chart the break-even points, for each salary structure, and the level of sales where the change of salary structure is worthwhile.

(8)

(Total for Question 3 = 20 marks)

- 4 The One Company Ltd, which buys and sells a single product, has prepared the following summarised budgeted Profit & Loss budgets for the period April to July Year 14.

	April	May	June	July
	£'s	£'s	£'s	£'s
Sales	200,000	220,000	240,000	260,000
Cost of sales	<u>120,000</u>	<u>132,000</u>	<u>144,000</u>	<u>156,000</u>
Gross profit	80,000	88,000	96,000	104,000
Wages	22,000	24,200	26,400	28,600
Overheads	<u>36,000</u>	<u>36,500</u>	<u>37,000</u>	<u>38,000</u>
Net profit	<u>22,000</u>	<u>27,300</u>	<u>32,600</u>	<u>37,400</u>

The following additional information for the period is available:

- (1) 10% of the sales are for cash; credit sales are paid in the month after sale.
- (2) Product purchases are paid for in the month following purchase.
- (3) Stock of product (at cost) is expected to be:

End of April	£21,000
End of May	£24,000
End of June	£26,000
End of July	£27,000

- (4) Wages are made up of a basic piece rate plus a 10% bonus.

The basic rate wage is paid in the month incurred and the bonus is paid the following month.

- (5) Depreciation of £8,000 is included in the overhead figure.  
60% of the overheads are paid in the month they are incurred, the remainder are paid the following month.
- (6) Capital expenditure of £20,000 and £30,000 is forecasted for April and June.
- (7) The following balances are expected at the beginning of April Year 14:

Stock of products	£19,000
Debtors	£160,000
Creditors	£110,000
Wages accrued	£1,800
Overheads accrued	£11,000
Bank	£10,000 overdrawn

Required

(a) Prepare the cash budget for each of the four months April to July, Year 14. (16)

(b) Describe two advantages of having a cash budget. (4)

(Total for Question 4 = 20 marks)

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Question 5 starts on the next page.

5 The standard production costs of a company's single product in the last period were as follows:

Direct materials:	1.6 kg @ £6.50 per kg
Direct labour:	0.75 hours @ £9.00 per hour

Production overheads (all fixed) are absorbed on the basis of standard direct labour hours. The budgeted fixed production overhead costs per unit of product were £9.75

The budgeted output in the period was 12,000 units of the product.

Raw material stocks are valued at standard cost.

Actual results for the period were:

Direct materials:	Opening stock 1,600 kg
	19,000 kg purchased at a cost of £123,960
	18,220 kg used in the production of 11,600 units of product
Direct labour:	8,810 hours worked at a cost of £78,840
Fixed production overheads:	£116,130 expenditure incurred

Required

(a) Calculate the following variances:

(i) Direct material price

(ii) Direct material usage

(iii) Direct labour rate

(iv) Direct labour efficiency

(v) Fixed overhead expenditure

(vi) Fixed overhead capacity

(vii) Fixed overhead efficiency

(11)

(b) Prepare the Raw Material Stock Account for the period. Include any relevant variances.

(5)

(c) Explain the difference between an ideal and an attainable standard.

(4)

(Total for Question 5 = 20 marks)

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TOTAL FOR PAPER = 100 MARKS