

## General Comments

Performance on this paper was broadly in line with that achieved at previous sittings. Performance on the calculation questions, especially the shorter-form question 1, was relatively strong and once again gave candidates every opportunity for success. However, also once again, success was too often not achieved due to poor performance in the remaining questions.

Poor time management seemed to be a factor for some candidates. Another problem was a lack of preparation for the analysis and application required in the longer-form scenario based questions which were also more narrative based. Candidates must recognise that narrative answers, required in many of the questions in Sections B and C, form a significant part of the paper (approximately 30%).

Question 1 (compulsory Section A) was invariably attempted first and most candidates were able to complete all parts of the question. However it was surprising to find that a number of candidates once again failed to attempt all ten multiple-choice questions. In the second part of question 1 (1.11 to 1.18) reasonable marks were gained on average on all parts, which this time all required calculations. Common errors to highlight were the comparison of budgeted and actual overhead costs (in 1.12), the apportionment of a share of joint costs to a by-product (in 1.13) and the inclusion of elements of the FIFO method (in 1.17).

The improved performance in question 2 (compulsory Section B), seen at the last examination, was maintained. However, candidates' performance remains disappointing. Narrative answers too often indicated a failure to read questions carefully and a general failure to answer the question with reference to the scenario presented.

The choice from the two questions in Section C was made last by the majority of candidates. A very clear preference was demonstrated for question 3 despite the fact that the calculations required in answer to part (a) of question 4, for eight marks, were straightforward. Reasonable marks were gained for the numerical part (a) of questions 3 and 4 but narrative answers to the remaining parts were very disappointing.

Candidates must try to manage the time they spend on each question in accordance with the marks available. They must also prepare themselves with a good knowledge of topic areas and read questions carefully. Reading time is provided in the examination for that purpose. Candidates must then respond to the specifics of a question and relate their narrative answers to the scenario presented, not simply write generally about a topic.

**Section A – 50 marks**

*The following data are given for sub-questions 1.1 to 1.3 below*

A company uses standard absorption costing. The following information was recorded by the company for October:

	<i>Budget</i>	<i>Actual</i>
Output and sales (units)	8,700	8,200
Selling price per unit	£26	£31
Variable cost per unit	£10	£10
Total fixed overheads	£34,800	£37,000

**Question 1.1**

The sales price variance for October was

- A** £38,500 favourable
- B** £41,000 favourable
- C** £41,000 adverse
- D** £65,600 adverse

*(2 marks)*

The answer is **B**

**Workings**

Standard selling price	£26
Actual selling price	£31
	£ 5 x 8,200 = £41,000 Favourable

### Question 1.2

The sales volume profit variance for October was

- A £6,000 adverse
- B £6,000 favourable
- C £8,000 adverse
- D £8,000 favourable

(2 marks)

The answer is **A**

### Workings

Sales profit volume variance

	<i>Units</i>	
Budgeted sales	8,700	
Actual sales	<u>8,200</u>	
	500	$\times (\pounds 26 - \pounds 10 - \pounds 4) = \pounds 6,000$ Adverse

### Question 1.3

The fixed overhead volume variance for October was

- A £2,000 adverse
- B £2,200 adverse
- C £2,200 favourable
- D £4,200 adverse

(2 marks)

The answer is **A**

### Workings

Fixed overhead volume variance

	<i>Units</i>	
Budgeted output	8,700	
Actual output	<u>8,200</u>	
	500	$\times \pounds 4 = \pounds 2,000$ Adverse

**Question 1.4**

A master budget comprises the

- A** budgeted income statement and budgeted cash flow only.
- B** budgeted income statement and budgeted balance sheet only.
- C** budgeted income statement and budgeted capital expenditure only.
- D** budgeted income statement, budgeted balance sheet and budgeted cash flow only.

*(2 marks)*

The answer is **D**

*The following data are given for sub-questions 1.5 and 1.6 below*

The annual operating statement for a company is shown below:

	<i>£000</i>
Sales revenue	800
Less variable costs	<u>390</u>
Contribution	410
Less fixed costs	90
Less depreciation	<u>20</u>
Net income	<u>300</u>
Assets	£6.75m

The cost of capital is 13% per annum.

**Question 1.5**

The return on investment (ROI) for the company is closest to

- A** 4.44%
- B** 4.74%
- C** 5.77%
- D** 6.07%

*(2 marks)*

The answer is **A**

**Workings**

$$\text{ROI } 300,000 / 6,750,000 \times 100 = 4.44\%$$

**Question 1.6**

The residual income (RI) for the company is closest to

£000

- A** (467)
- B** (487)
- C** (557)
- D** (577)

*(2 marks)*

The answer is **D**

**Workings**

RI £300K – 877.5K (13% x £6.75m) = -£577.5K

**Question 1.7**

A company has reported annual operating profits for the year of £89.2m after charging £9.6m for the full development costs of a new product that is expected to last for the current year and two further years. The cost of capital is 13% per annum. The balance sheet for the company shows fixed assets with a historical cost of £120m. A note to the balance sheet estimates that the replacement cost of these fixed assets at the beginning of the year is £168m. The assets have been depreciated at 20% per year.

The company has a working capital of £27.2m.

Ignore the effects of taxation.

The Economic Value Added® (EVA) of the company is closest to

- A** £64.16m
- B** £70.56m
- C** £83.36m
- D** £100.96m

(2 marks)

The answer is **A**

**Workings**

	<i>£m</i>
Profit	89.20
Add	
Current depreciation (120 x 20%)	24.00
Development costs (9.60 x 2/3)	6.40
Less	
Replacement depreciation (168 x 20%)	33.60
Adjusted profit	86.00
Less cost of capital charge (Working 1)	<u>21.84</u>
EVA	<u>64.16</u>
 <i>Working 1</i>	
Cost of capital charge	
Fixed assets (168 – 33.6)	134.4
Working capital	27.2
Development costs	<u>6.4</u>
	<u>168.0</u> x 13% = 21.84

**Question 1.8**

Which of the following definitions are correct?

- (i) Just-in-time (JIT) systems are designed to produce or procure products or components as they are required for a customer or for use, rather than for inventory;
- (ii) Flexible manufacturing systems (FMS) are integrated, computer-controlled production systems, capable of producing any of a range of parts and of switching quickly and economically between them;
- (iii) Material requirements planning (MRP) systems are computer based systems that integrate all aspects of a business so that the planning and scheduling of production ensures components are available when needed.

- A** (i) only
- B** (i) and (ii) only
- C** (i) and (iii) only
- D** (ii) and (iii) only

*(2 marks)*

The answer is **B**

**Question 1.9**

RJD Ltd operates a standard absorption costing system. The following fixed production overhead data is available for one month:

Budgeted output	200,000	units
Budgeted fixed production overhead	£1,000,000	
Actual fixed production overhead	£1,300,000	
Total fixed production overhead variance	£100,000	Adverse

The actual level of production was

- A** 180,000 units.
- B** 240,000 units.
- C** 270,000 units.
- D** 280,000 units.

*(2 marks)*

The answer is **B**

**Workings**

OAR  $1,000/200 = £5$  per unit

Total variance	
Actual	£1,300,000
Absorbed	<u>£1,200,000</u>
	£ 100,000 adverse
$£1,200,000/£5 =$	240,000



### Question 1.10

WTD Ltd produces a single product. The management currently uses marginal costing but is considering using absorption costing in the future.

The budgeted fixed production overheads for the period are £500,000. The budgeted output for the period is 2,000 units. There were 800 units of opening inventory at the beginning of the period and 500 units of closing inventory at the end of the period.

If absorption costing principles were applied, the profit for the period compared to the marginal costing profit would be

- A £75,000 higher.
- B £75,000 lower.
- C £125,000 higher.
- D £125,000 lower.

(2 marks)

The answer is **B**

### Workings

	<i>Units</i>
Opening inventory	800
Closing inventory	<u>500</u>
Decrease	<u>300</u> x (£500,000/2,000) = £75,000 lower

**Question 1.11**

JJ Ltd manufactures three products: W, X and Y. The products use a series of different machines but there is a common machine that is a bottleneck.

The standard selling price and standard cost per unit for each product for the forthcoming period are as follows:

	W £	X £	Y £
Selling price	200	150	150
Cost			
Direct materials	41	20	30
Labour	30	20	36
Overheads	<u>60</u>	<u>40</u>	<u>50</u>
Profit	<u>69</u>	<u>70</u>	<u>34</u>
Bottleneck machine – minutes per unit	9	10	7

40% of the overhead cost is classified as variable

Using a throughput accounting approach, what would be the ranking of the products for best use of the bottleneck?

*(3 marks)*

**Workings**

	W £	X £	Y £
Selling price	200	150	150
Cost			
Direct materials	<u>41</u>	<u>20</u>	<u>30</u>
Throughput contribution	159	130	120
TP/LF	159/9	130/10	120/7
	£17.66	£13.00	£17.14
Ranking	1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>

**Question 1.12**

X Ltd has two production departments, Assembly and Finishing, and two service departments, Stores and Maintenance.

Stores provides the following service to the production departments: 60% to Assembly and 40% to Finishing.

Maintenance provides the following service to the production and service departments: 40% to Assembly, 45% to Finishing and 15% to Stores.

The budgeted information for the year is as follows:

Budgeted fixed production overheads	
Assembly	£100,000
Finishing	£150,000
Stores	£ 50,000
Maintenance	£ 40,000
 Budgeted output	 100,000 units

At the end of the year after apportioning the service department overheads, the total fixed production overheads debited to the Assembly department's fixed production overhead control account were £180,000.

The actual output achieved was 120,000 units.

Calculate the under/over absorption of fixed production overheads for the Assembly department.

*(4 marks)*

**Workings**

	<i>Assembly</i> (£)	<i>Finishing</i> (£)	<i>Stores</i> (£)	<i>Maintenance</i> (£)
Overheads	100,000	150,000	50,000	40,000
Reapportion				
Maintenance	16,000	18,000	6,000	-40,000
Stores	<u>33,600</u>	<u>22,400</u>	-56,000	
	149,600	190,400	Nil	Nil
OAR	149,600/100,000			
	£1.496 per unit			
 Assembly				
Absorbed 120,000 x £1.496		£179,520		
Incurred		£180,000		
Under absorbed		£480		

**Question 1.13**

A company simultaneously produces three products (X, Y and Z) from a single process. X and Y are processed further before they can be sold; Z is a by-product that is sold immediately for \$6 per unit without incurring any further costs. The sales prices of X and Y after further processing are \$50 per unit and \$60 per unit respectively.

Data for October are as follows:

Joint production costs that produced 2,500 units of X, 3,500 units of Y and 3,000 units of Z	\$ 140,000
Further processing costs for 2,500 units of X	24,000
Further processing costs for 3,500 units of Y	46,000

Joint costs are apportioned using the final sales value method.

Calculate the total cost of the production of X for October.

*(3 marks)*

**Workings**

\$140,000 - \$18,000 (by product)	\$122,000
Sales revenue	
X (2,500 x \$50)	\$125,000
Y (3,500 x \$60)	<u>\$210,000</u>
	\$335,000

Split between products

X $[(\$125,000/\$335,000) \times \$122,000] + \$24,000 =$	\$69,522
Y $[(\$210,000/\$335,000) \times \$122,000] + \$46,000 =$	<u>\$122,475</u>
	<u>\$191,997</u> rounding

**Question 1.14**

ZP Plc operates two subsidiaries, X and Y. X is a component manufacturing subsidiary and Y is an assembly and final product subsidiary. Both subsidiaries produce one type of output only. Subsidiary Y needs one component from subsidiary X for every unit of Product W produced. Subsidiary X transfers to Subsidiary Y all of the components needed to produce Product W. Subsidiary X also sells components on the external market.

The following budgeted information is available for each subsidiary:

	X	Y
Market price per component	\$800	
Market price per unit of W		\$1,200
Production costs per component	\$600	
Assembly costs per unit of W		\$400
Non production fixed costs	\$1.5m	\$1.3m
External demand	10,000 units	12,000 units
Capacity	22,000 units	
Taxation rates	25%	30%

The production cost per component is 60% variable. The fixed production costs are absorbed based on budgeted output.

X sets a transfer price at marginal cost plus 70%.

Calculate the post tax profit generated by each subsidiary.

*(4 marks)*

**Workings**

1.14	X (\$)	Y (\$)
<b>Sales</b>		
10,000 x \$800	8,000,000	
12,000 x \$612	7,344,000	
12,000 x \$1,200		14,400,000
<b>Costs</b>		
22,000 x \$360	-7,920,000	
12,000 x \$1,012		-12,144,000
<b>Fixed costs</b>		
Production 22,000 x \$240	-5,280,000	
Non production	-1,500,000	-1,300,000
<b>Profit</b>	644,000	956,000
<b>Tax</b>	<u>-161,000</u>	<u>-286,800</u>
<b>Profit after tax</b>	<u>483,000</u>	<u>669,200</u>

**Question 1.15**

PP Ltd operates a standard absorption costing system. The following information has been extracted from the standard cost card for one of its products:

Budgeted production	1,500 units
Direct material cost: 7 kg x £4.10	£28.70 per unit

Actual results for the period were as follows:

Production	1,600 units
Direct material (purchased and used): 12,000 kg	£52,200

It has subsequently been noted that due to a change in economic conditions the best price that the material could have been purchased for was £4.50 per kg during the period.

- (i) Calculate the material price planning variance.
- (ii) Calculate the operational material usage variance.

**(4 marks)**

**Workings**

Planning variance	<i>£ per kg</i>
Ex-ante standard	4.10
Ex-post standard	<u>4.50</u>
	0.40 x 11,200 = £4,480 Adverse
Usage variance	<i>kg</i>
Standard 7 x 1,600	11,200
Actual	<u>12,000</u>
	800 x £4.50 = £3,600 Adverse

**Question 1.16**

CJD Ltd manufactures plastic components for the car industry. The following budgeted information is available for three of their key plastic components:

	<i>W</i> £ per unit	<i>X</i> £ per unit	<i>Y</i> £ per unit
Selling price	200	183	175
Direct material	50	40	35
Direct labour	30	35	30
Units produced and sold	10,000	15,000	18,000

The total number of activities for each of the three products for the period is as follows:

Number of purchase requisitions	1,200	1,800	2,000
Number of set ups	240	260	300

Overhead costs have been analysed as follows:

Receiving/inspecting quality assurance	£1,400,000
Production scheduling/machine set up	£1,200,000

Calculate the budgeted profit per unit for each of the three products using activity based budgeting.

*(4 marks)*

**Workings**

	<i>W</i> £ per unit	<i>X</i> £ per unit	<i>Y</i> £ per unit
Selling price	200.00	183.00	175.00
Direct material	50.00	40.00	35.00
Direct labour	30.00	35.00	30.00
Overheads			
Receiving/inspecting etc	33.60	33.60	31.11
Production scheduling	<u>36.00</u>	<u>26.00</u>	<u>25.00</u>
Profit per unit	<u>50.40</u>	<u>48.40</u>	<u>53.89</u>

Cost driver rates

Receiving/inspecting quality assurance	$£1,400,000/5,000 = £280$ per requisition
Production scheduling/machine set up	$£1,200,000/800 = £1,500$ per set up

**Question 1.17**

CW Ltd makes one product in a single process. The details of the process for period 2 were as follows:

There were 800 units of opening work in progress valued as follows:

Material	£98,000
Labour	£46,000
Production overheads	£7,600

During the period 1,800 units were added to the process and the following costs were incurred:

Material	£387,800
Labour	£276,320
Production overheads	£149,280

There were 500 units of closing work in progress, which were 100% complete for material, 90% complete for labour and 40% complete for production overheads.

A normal loss equal to 10% of new material input during the period was expected. The actual loss amounted to 180 units. Each unit of loss was sold for £10 per unit.

CW Ltd uses weighted average costing.

Calculate the cost of the output for the period.

*(4 marks)*

**Workings**

Equivalent units table

Description	Units	Materials		Labour		Overheads	
		%	EU	%	EU	%	EU
Output	1,920	100	1,920	100	1,920	100	1,920
CWIP	500	100	<u>500</u>	90	<u>450</u>	40	<u>200</u>
			<u>2,420</u>		<u>2,370</u>		<u>2,120</u>
Costs			£		£		£
OWIP			98,000		46,000		7,600
Process			<u>387,800</u>		<u>276,320</u>		<u>149,280</u>
			485,800		322,320		156,880
Less normal loss – 180 x £10			<u>1,800</u>				
			<u>484,000</u>				
EU cost			£200		£136		£74

Value of Output – 1,920 units x (£200 + £136 + £74) = £787,200



**Question 1.18**

SS Ltd operates a standard marginal costing system. An extract from the standard cost card for the labour costs of one of its products is as follows:

Labour cost	
5 hours x £12	£60

Actual results for the period were as follows:

Production	11,500 units
Labour rate variance	£45,000 adverse
Labour efficiency variance	£30,000 adverse

Calculate the actual rate paid per direct labour hour.

*(4 marks)*

**Workings**

Efficiency variance	
Standard hours	57,500
Actual hours	<u>60,000</u>
	2,500 x £12 = £30,000 Adverse
Rate variance	
Standard rate	£12.00
Actual rate	<u>£12.75</u>
	£0.75 x 60,000 hours = £45,000 Adverse

**Section B – 30 marks**

ANSWER ALL SIX SUB-QUESTIONS. EACH SUB-QUESTION IS WORTH 5 MARKS

**Question 2(a)**

Prepare the following budgets for each quarter for X Plc:

- (i) Production budget in units;
- (ii) Raw material purchases budget in kgs and value for Material B.

**(5 Marks)**

**Rationale**

Sub-question (a) covers learning outcome C(iii) – *Calculate projected revenues and costs based on product/service volumes, pricing strategies and cost structures.*

**Suggested Approach**

Draw up a pro-forma for each budget and insert the figures.

**Marking Guide**

	<b>Marks</b>
Production budget	2
Raw material purchases budget	3

**Examiner's Comments**

This was a relatively straightforward question, although a number of calculations were required. However a number of common errors were made.

*Common Errors*

- Adding opening inventory and deducting closing inventory i.e. reversing the required inventory adjustment;
- Ignoring either the opening or closing inventory in the adjustments;
- Ignoring opening inventory at the start of Quarter 1;
- Merging the two materials together;
- Using sales quantities rather than production quantities in part (ii).

### Question 2(b)

X Plc has just been informed that Material A may be in short supply during the year for which it is preparing budgets. Discuss the impact this will have on budget preparation and other areas of X Plc.

*(5 Marks)*

### Rationale

Sub-question (b) covers learning outcome C(iii) – *Calculate projected revenues and costs based on product/service volumes, pricing strategies and cost structures.*

### Suggested Approach

Consider the question in the context of the scenario and focus on issues arising for X Plc as a result of a shortage of material A – key budget factor. Also broader answers considering other impacts on budget preparation are just as valid.

### Marking Guide

Reasonable impact on budget preparation and other areas – 1 mark each point

### Marks

5

### Examiner's Comments

A wide range of implications of a possible shortage of Material A, especially for other areas of X Plc, were accepted in candidates' answers.

### Common Errors

- Failing to appreciate that Material A may be used in other products manufactured by X Plc and that, as a consequence the allocation of Material A based on contribution per unit of the resource may be required;
- Not recognising that Material A becomes the key budget factor and/or the implications of this for budget preparation.

### Question 2(c)

Assuming that the budgeted production of Product W was 7,700 units and that the following actual results were incurred for labour and overheads in the year:

Actual production	7,250 units
Actual overheads	
Variable	£185,000
Fixed	£105,000
Actual labour costs	
Skilled - £16.25 per hour	£568,750
Semi-skilled - £8 per hour	£332,400

Prepare a flexible budget statement for X Plc showing the total variances that have occurred for the above four costs only.

(5 Marks)

### Rationale

Sub-question (c) covers learning outcome C(xi) – *Evaluate performance using fixed and flexible budget reports.*

### Suggested Approach

Produce the operating statement pro-forma  
 Insert the fixed and actual figures  
 Calculate and insert the flexed budget figures – use the high low method  
 Calculate the variances for each cost  
 Total the columns in the statement

### Marking Guide

	Marks
Format	1
Flexed budget	2
Variances	2

### Examiner's Comments

Full marks were gained by a reasonable number of candidates but there were also several common errors.

#### Common Errors

- Making no attempt to flex the budget and simply calculating the variances as the difference between the actual costs and the fixed budget;
- Basing the flexing on the actual cost figures (i.e.  $\text{Actual} \times 7,700/7,250$ ) to produce a flexed budget;
- Flexing the fixed overhead which was clearly stated in the question to be 40% of £280,000;
- Making errors in variance signing (adverse/favourable).

### Question 2(d)

X Plc currently uses incremental budgeting. Explain how Zero Based Budgeting could overcome the problems that might be faced as a result of the continued use of the current system.

*(5 Marks)*

### Rationale

Sub-question (d) covers learning outcome C(vi) – *Evaluate and apply alternative approaches to budgeting.*

### Suggested Approach

Explain the drawbacks of incremental budgeting  
Explain the benefits of zero based budgeting  
Ensure your answer is set in the context of the scenario

### Marking Guide

Incremental budgeting  
Zero based budgeting

### Marks

2  
3

### Examiner's Comments

Most candidates were able to describe the basic characteristics of both incremental and zero-based budgeting but were often unable to develop this and/or apply it to the situation of X Plc.

### Common Errors

- Demonstrating a lack of appreciation of the implications of a changing business environment.

### Question 2(e)

Explain how rolling budgets are used and why they would be suitable for X Plc.

(5 Marks)

### Rationale

Sub-question (e) covers learning outcome C(vi) – *Evaluate and apply alternative approaches to budgeting.*

### Suggested Approach

Explain rolling budgets – candidates could make up their own example by way of explanation.

Consider its appropriateness for X Plc, that is, the company is experiencing increasing competition and will need to be able to react, hence the fixed budget may not be appropriate etc.

### Marking Guide

Rolling budget system

**Marks**

3

Relate to X Plc – 1 mark for each point

2

### Examiner's Comments

Candidates frequently seemed to confuse rolling budgets with revisions to budgets.

#### *Common Errors*

- Failing to clearly explain and/or illustrate the key characteristics of, and rationale for, rolling budgets as opposed to, for example, budget revisions/outturn forecasts;
- Demonstrating a lack of awareness of why rolling budgets would be suitable for X Plc.

### Question 2(f)

Briefly explain how linear regression analysis can be used to forecast sales and briefly discuss whether it would be a suitable method for X Plc to use.

(5 marks)

### Rationale

Sub-question (f) covers learning outcome C(ii) – *Calculate projected product/service volumes employing appropriate forecasting techniques.*

### Suggested Approach

Explain linear regression – candidates again could use their own examples to illustrate. Consider the suitability for X Plc. Candidates may have a positive or negative view but this must be explained.

### Marking Guide

Linear regression explanation  
Suitability for X Plc

### Marks

3  
2

### Examiner's Comments

This part was generally answered poorly.

#### Common Errors

- Confusing the analysis with linear regression applied to costs. Many candidates discussed/illustrated equations containing fixed and variable costs;
- Failing to appreciate the limitations of extrapolation and the problems caused by variations e.g. cyclical, seasonal;
- Failing to appreciate the implications of the changing business environment.

### Section C – 20 marks

ANSWER ONE OF THE TWO QUESTIONS

#### Question 3(a)

- (a) Prepare an operating statement which reconciles the budgeted profit to the actual profit for the period. (The statement should include the material mix and material yield variances).

(12 marks)

#### Rationale

Part (a) covers learning outcome B(iii) – *Prepare and discuss a report which reconciles budget and actual profit using absorption and/or marginal costing principles.*

#### Suggested Approach

Produce the operating statement pro-forma  
Insert the budgeted and actual profit figures  
Calculate the variances  
Reconcile the budgeted and actual profit figures

#### Marking Guide

	Marks
Format	1
Sales volume contribution variance	1
Selling price variance	1
Material price variances – A, B and C	3
Material mix variances – A, B and C	3
Material yield variance	2
Fixed production overhead expenditure variance	1

#### Examiner's Comments

Many candidates made a reasonable attempt at variance calculation and reconciliation.

#### Common Errors

- Duplicating variances: in particular many candidates calculated the material usage variance and included it in the reconciliation statement in addition to the material mix and yield variances;
- Evaluating the sales volume variance at sales value rather than using the contribution rate;
- Calculating the fixed overhead volume variance, which does not arise in marginal costing;
- Making errors in variance signing (adverse/favourable).



### Question 3(b)

- (b) The Production Manager of X Ltd is new to the job and has very little experience of management information. Write a brief report to the Production Manager of X Ltd that
- (i) interprets the material price, mix and yield variances;
  - (ii) discusses the merits, or otherwise, of calculating the materials mix and yield variances for X Ltd.

(8 marks)

### Rationale

Part (b) covers learning outcome B(ii) - *Calculate and interpret material, labour, variable overhead, fixed overhead and sales variances.*

### Suggested Approach

Produce the report headings.

Interpret the material price, mix and yield variances that have been calculated in part a).

Discuss the merits or otherwise of these calculations for X Plc, that is, different aspects of the production process are highlighted to allow the managers to attain the optimum combination of materials input and so on.

### Marking Guide

	Marks
Report format	1
Interpretation of material price, mix and yield variances	4
Advantages of calculating mix and yield variances – 1 mark for each point	3

### Examiner's Comments

Answers were often generic in nature, rather than related to the answers to part (a), and frequently merely stated how the different variances are calculated. Other candidates believed wrongly that simply stating the obvious was enough e.g. 'the material price variance is adverse'.

### Common Errors

- Producing incorrect interpretations of variances (based on the candidate's own figures).

#### Question 4(a)

- (a) If the transfer price of the component is set by the Manager of Division X at the current market price (£20 per component), recalculate the budgeted performance measures for each division.

(8 marks)

#### Rationale

Part (a) covers learning outcome D(iv) – *Calculate and apply measures of performance for investment centres.*

#### Suggested Approach

Calculate each of the four performance measures as a result of setting the transfer price at market price.

#### Marking Guide

	Marks
Income statement	3
Residual income	1
ROCE	1
Operating profit margin	1.5
Asset turnover	1.5

#### Examiner's Comments

An extremely unpopular question but the calculations were often well done where attempted.

#### Common Errors

- Not adjusting the sales value of Division X;
- Not understanding the asset turnover calculation.

**Question 4(b)**

(b) Discuss the changes to the performance measures of the divisions that would arise as a result of altering the transfer price to £20 per component.

(6 marks)

**Rationale**

Part (b) covers learning outcome D(vi) - *Explain the typical consequences of a divisional structure for performance measurement as divisions compete or trade with each other.*

**Suggested Approach**

Produce a table that compares each of the four performance measures.  
Discuss the differences for each performance measure.  
Consider the overall impact on the group.

**Marking Guide**

**Marks**

Changes to the performance measures of the divisions – 1 mark for each  
Overall impact

4  
2

**Examiner's Comments**

Often only very brief and basic comments, if any, were made on the changed performance measures..

#### Question 4(c)

- (c) (i) Explain the problems that could arise for each of the Divisional Managers and for ZZ Group as a whole as a result of giving full autonomy to the Divisional Managers.
- (ii) Discuss how the problems you have explained could be resolved without resorting to a policy of imposed transfer prices.

(6 marks)

#### Rationale

Part (c) covers learning outcome D(vii) - *Identify the likely consequences of different approaches to transfer pricing for divisional decision making, divisional and group profitability, the motivation of divisional management and the autonomy of individual divisions.*

#### Suggested Approach

Discuss the problems of giving full autonomy to the divisional managers.  
Discuss how these problems could be overcome.  
Ensure that the answer is within the context of the scenario.

#### Marking Guide

#### Marks

Problems that could arise as a result of full autonomy – 1 mark for each point  
Resolution of these problems – 1 mark for each point

3  
3

#### Examiner's Comments

A flexible approach was taken to marking. For example, it was accepted that negotiation may be judged not to be involved in part (i) but instead could be viewed as a solution in part (ii).

#### Common Errors

- Failing to appreciate the potential problems and solutions arising from the scenario presented.