Standard costing

Questions and Answers (A level)

Question 1

March 2017

5 Joshua makes a single product and uses standard costing.

REQUIRED

(a) State one reason why each of the following variances may arise for a business.

(i) favourable material usage [1]

(ii) adverse labour efficiency [1]

Additional information

The standard costs for the month of June were:

		Per unit
		\$
Direct material	5 kilos at \$2 per kilo	10
Direct labour	2 hours at \$8 per hour	16
Fixed production overhead	2 hours at \$4 per hour	_8_
		34

Budgeted production for June was 19000 units.

Actual data for the month of June was:

		\$
Direct material	83 100 kilos	182 820
Direct labour	37 500 hours	281250
Fixed production overheads		115 000

Actual production for the month of June was 17500 units. There were no opening or closing inventories.

REQUIRED

(b) Calculate the following variances for the month of June:

(i)	Material price	[2]
(ii)	Material usage	[2]
(iii)	Labour rate	[2]
(iv)	Labour efficiency	[2]
(v)	Fixed overhead efficiency	[3]
(vi)	Fixed overhead capacity	[3]

Additional information

There was a favourable fixed overhead expenditure variance of \$37000.

REQUIRED

(c) Prepare a statement reconciling the standard cost of production with the actual cost of production. [4]

Additional information

Jenny, Joshua's sister, has told Joshua that it is not necessary to continue operating a standard costing system.

REQUIRED

(d) Advise Joshua whether or not he should continue to use standard costing. Justify your answer. [5]

[Total: 25]

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Question	Answer	Marks
5(a)(i)	Material usage Experienced labour New machinery Better quality materials (less wastage) (1 mark) any one reason, max 1	1
5(a)(ii)	Labour efficiency Less skilled labour Lower grade materials More idle time than budgeted Poor supervision Machine breakdowns (1 mark) any one reason, max 1	1
5(b)(i)	Material price	2
	Std 83 100 kilos · \$2 166 200 Actual 182 820 166 20 (1) A (1)	
5(b)(ii)	Material usage	2
	Std 17500 units · 5 kilo 87500 Actual 83100 4400 Kilos F \$2 \$8800 (1) F (1)	
5(b)(iii)	Labour rate	2
	Std 37 500 hrs • \$8 300 000 (1) Actual 281 250 (1) F	

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Question	Answer	Marks
5(b)(iv)	Labour efficiency	2
	Std 17500 units · 2 hrs 35000 Actual 37500 2500 hrs A · \$8 \$20000 (1) A (1)	
5(b)(v)	Fixed overhead efficiency	3
	Actual hours 37 500 Std hours 35 000 hours 2500 - \$4 (1)	
5(b)(vi)	Fixed overhead capacity	3
	Actual hours 37 500 Std hours 38 000 hours 500 - \$4 (1) \$2 000 (1) A (1)	

Question				Answer			Marks
Question 5(c)	Standard cost of actual product Variances Material price Material usage Labour rate Labour efficiency Fixed overhead expenditure Fixed overhead efficiency Fixed overhead capacity Actual cost of production (1) both	Fav \$ 8 800 18 750 37 000	Adv \$ 16 620 20 000 10 000 2 000 48 620	**Answer************************************	\$ 595 000 15 930 579 070	F (1of)	Marks 4
	Working: Actual cost of production: Direct materials Direct labour Fixed production overheads	28° 119	\$ 2 820 1 250 5 000 9 070				

Question	Answer	Marks
5(d)	Assist in setting budgets. Evaluate managerial performance. Predict future costs for decision making. Motivate staff by providing targets. Provide ways of improving efficiency. Control device – uses variance analysis. Valuing inventories. Expensive Time consuming to operate Requires specialist knowledge Advice 1 mark 4 for reasons	5
		25

Question 3

March 2019

Jack makes a single product and uses a standard costing system. The budget for each month is based on the following standard data per unit.

Direct material 0.5 kilos at \$6 per kilo Direct labour 1.5 hours at \$4.50 per hour Fixed production overhead 1.5 hours at \$5 per hour

Budgeted production and sales for each month are 6500 units.

The actual data for the month of September was:

2800 kilos cost \$17350 Direct material Direct labour 9500 hours cost \$42275

\$52 100 Total fixed production overheads

Actual production and sales for September were 5900 units.

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

(a) Calculate the following variances for the month of September.

	(i)	Material price	[2]
	(ii)	Material usage	[2]
(iii)	Labour rate	[2]
(iv)	Labour efficiency	[2]
(b)	Sug	ggest one possible cause for each of the variances calculated in (a) .	[4]
(c)	Cal	culate the following variances for the month of September.	
	(i)	Fixed overhead expenditure	[2]
	(ii)	Fixed overhead volume	[2]

Additional information

For the month of October, Jack has calculated an adverse fixed overhead volume variance.

- (d) Explain how October's fixed overhead volume variance can be further analysed to provide Jack with more information about the performance of the business. [5]
- (e) State two advantages and two disadvantages to Jack of using standard costing system. [4]

Question	Answer	Marks
6(a)(i)	Material price	2
	standard 2800 kilos × \$6 16 800 actual 17 350 \$550 (1) A (1)	

Question	Answer	Marks
6(a)(ii)	standard 5900 units × 0.5 kilos 2 950 actual × 0.5 kilos × 6.5 kil	2
6(a)(iii)	Labour rate \$ standard 9500 hours × \$4.50 42 750 actual 42 275 5475 (1) F (1)	2
6(a)(iv)	Labour efficiency	2
	1 mark for calculation plus 1 mark for direction	

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Question	Answer	Marks
6(b)	Material price variance – adverse	4
	Unexpected price increase.	
	Loss of previous discount from supplier.	
	Better quality materials purchased.	
	(1 mark) × any 1 reason OF	
	Material usage variance – favourable	
	Less wastage due to better quality material.	
	Less wastage due to better skilled/experienced workforce.	
	(1 mark) × any 1 reason OF	
	Labour rate – favourable	
	A planned pay increase was not given.	
	Use of lower skilled labour.	
	Greater supply of labour.	
	(1 mark) × any 1 reason OF	

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Question	Answer	Marks
6(b)	Labour efficiency - adverse	
	Use of lower quality material.	
	Use of lower skilled labour.	
	More idle time than budgeted.	
	Poor supervision	
	(1 mark) × any 1 reason OF Accept other valid points.	
6(c)(i)	Fixed overhead expenditure	2
	standard 6500 units × 1.5 hours × \$5 48 750 actual 52 100 33 350 (1) A (1)	
6(c)(ii)	Fixed overhead volume	2
	standard units 6 500 actual units 5 900	
	actual units	
	Standard OAR 1.5 hours × \$5 × \$7.50	
	\$4500(1) A (1)	

Question	Answer	Marks
6(d)	The fixed overhead volume variance is the difference between the actual and budgeted production and can be broken down further (to show what caused this difference) into the fixed overhead efficiency (1) and fixed overhead capacity. (1)	5
	If Jack calculated the fixed overhead efficiency he would know how much of the volume variance was due to the efficiency of his workforce. (1) As the volume variance was adverse for Jack this could mean the workforce worked more slowly than expected (1) due to lack of skills, poor material quality. (1)	
	If Jack calculated the fixed overhead capacity he would know how much of the <i>volume</i> variance was due to number of hours worked. (1) As the <i>volume</i> variance was adverse for Jack this could mean the workforce worked fewer hours than expected (1) due to strikes, machine breakdown or shortage of labour. (1)	
	Accept other valid points.	
	Max 5	

Question	Answer	Marks
6(e)	Advantages	4
	Acting as a control device in variance analysis (1)	
	Assisting in budget setting (1)	
	Evaluating managers performance (1)	
	Predicting future costs to aid decision making (1)	
	Providing targets to motivate staff (1)	
	Suggesting ways to improve efficiency (1)	
	Enabling more accurate inventory valuation (1)	
	Disadvantages	
	Time consuming to collect data (1)	
	Standards based on estimates (1)	
	Unrealistic standards can demotivate staff (1)	
	Factors causing variances are outside his control (1)	
	Max 2 marks for advantages and Max 2 marks for disadvantages Accept other valid points.	

Question 4

May june 2018

C Limited produces tables. Each table requires the following:

raw materials	3 metres of wood at \$80 per metre
direct labour	12 hours at \$30 per hour
fixed production	overhead \$10 per direct labour hour

Budgeted production is 5000 tables.

Actual production was 4800.

Actual production costs were:

		Φ
direct materials	15 360 metres	1 190 400
direct labour	55 200 hours	1766400
fixed production overhead		579 600

All tables produced were sold.

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

- (a) State two limitations of a standard costing system. [2]
- (b) Calculate the following variances:
 - (i) direct materials price
 - (ii) direct materials usage
 - (iii) direct labour rate
 - (iv) direct labour efficiency
 - (v) fixed overhead expenditure
 - (vi) fixed overhead volume [12]
- (c) Prepare a statement reconciling the budgeted cost of producing 4800 tables with the actual cost.
 [8]

Additional information

The directors are considering using higher quality wood and increasing the selling price.

(d) Advise the directors whether or not they should make these changes. Justify your answer.

[3]

[Total: 25]

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Question	Answer			
6(a)	Responses could include:		2	
	the setting of standards is time consuming/costly e.g. needs a specialist			
	standards need to be updated regularly as business	conditions change rapidly		
	too high a standard may have a demotivating effect on staff			
	setting standards involves prediction which has an element of uncertainty/inaccurate			
	(1 mark) · 2 limitations			
6(b)(i)	Direct materials price variance \$ (15 360 ⋅ \$80) – \$1 190 400 38 400	(F)	2	
6(b)(ii)	Direct materials usage variance (15 360 – 4800 · 3) · \$80 76 800	(A)	2	
6(b)(iii)	Direct labour rate variance (55 200 · \$30) – \$1 766 400 110 400) (A)	2	
6(b)(iv)	Direct labour efficiency variance (55 200 − 4800 ⋅ 12) ⋅ \$30 72 000	(F)	2	
6(b)(v)	Fixed overhead expenditure variance \$600 000 - \$579 600 20 400	(F)	2	
6(b)(vi)	Fixed overhead volume variance \$600 000 - \$576 000 24 000	(A)	2	

Question		Answer	Answer	
6(b)	For reference:	Direct materials 3 · \$80 Direct labour 12 · \$30 Production overhead 12 · \$10 Unit production cost Static budget Direct materials 5 000 · \$240 Direct labour 5 000 · \$360 Production overhead 5 000 · \$120	\$ 240 360 120 720 \$ 1 200 000 1 800 000 600 000	Mark
6(c)		Production cost for 5 000 units Budgeted cost W1 Direct material price variance Direct material usage variance Direct labour rate variance Direct labour efficiency variance Fixed OH expenditure variance Fixed OH volume variance Production cost	3 600 000 \$ 3 456 000 (4) OF (38 400)) (1) OF 76 800 } 110 400 } (1) OF (72 000) } (20 400) } (1) OF 24 000 } 3 536 400 (1)	
		W1 Flexed budget Direct materials 4 800 · \$240 Direct labour 4 800 · \$360 Production overhead 4 800 · \$120 Production cost for 4 800 units	\$ 1 152 000 (1) 1 728 000 (1) 576 000 (1) 3 456 000 (1) OF	

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Question	Answer	Marks
6(d)	Increasing selling price may lose existing customers	3
	May gain new customers looking for high quality product	
	Higher quality product will enhance the reputation of the business	
	Will adversely affect the material price variance	
	May improve material usage variance/less wastage	
	May further improve labour efficiency variance with the use of high quality materials	
	Accept other valid points.	
	(2) marks for justification and (1) mark for decision.	