Specimen Exam 1

Exam Name: Management Accounting (K2)
Time Allowed: 2 hours
Pass Mark: 50%

This exam contains 2 sections:

Section A:
35 questions, each worth 2 marks
70 marks in total

Section B:
3 questions, each worth 10 marks
30 marks in total

Section A

Question 1

Innis Co, a manufacturing company, has carried out market research to find out the types of products its customers prefer. In light of this, it has finalised the design of a new product and the management accountant has been asked to prepare an investment appraisal for the new product.

Select whether each of the following items is a relevant cash flow or not a relevant cash flow for the investment appraisal of the new product.

		Relevant	Not relevant
1.	Depreciation charge on the new equipment which will be required for the manufacture of the new product		
2.	The design costs for the new product		

Question 2

The number of daily complaints to a local government office has a mean of 12 and a standard deviation of 3 complaints.

Calculate the coefficient of variation as a %.

[ ] %

Question 3

Lonaig Co uses process costing. Information relating to two of its processes (F and G) for the last period was as follows:

Process	Normal loss as % of input	Input (litres)	Output (litres)
F	8	65,000	58,900
G	5	37,500	35,700

Select whether an abnormal loss or an abnormal gain occurred for each process.

		Abnormal loss	Abnormal gain
1.	Process F		
2.	Process G		

Question 4

Lonsay Co is a manufacturing company. It has produced the following budget information for the next period:

	Units		$
Production	14,000	Fixed production costs	63,000
Sales	12,000	Fixed selling costs	12,000

The normal level of activity is 14,000 units per period. Using absorption costing the profit for next period has been calculated as $36,000.

Calculate the profit for the next period using marginal costing.

$ ☐

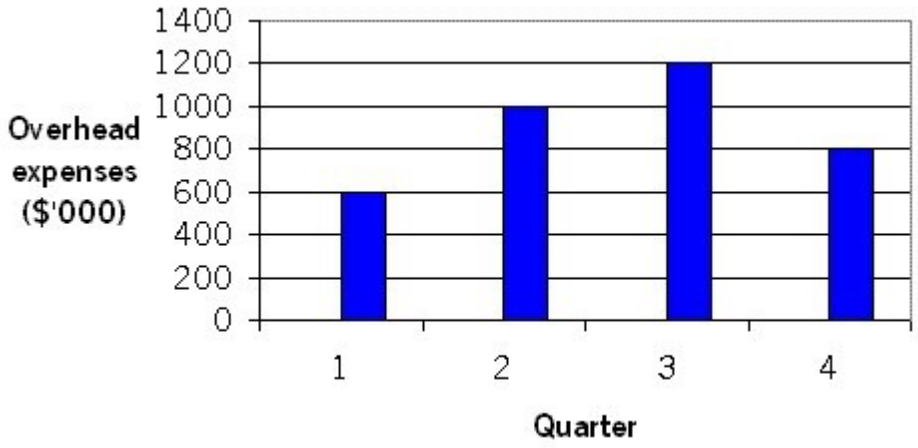
Question 5

Select whether each of the following statements about cost behaviour is true or false.

		True	False
1.	The variable element of a semi-variable cost can be calculated from a line graph that shows the total cost on the y axis versus the level of production on the x axis		
2.	On a line graph that shows the cost per unit on the y axis and the level of production on the x axis, fixed costs would be shown as a horizontal line		

Question 6

The following bar chart shows the overhead expenses for a company for each quarter of 20X1.



Calculate the reduction in overhead expenses between Quarter 3 and Quarter 4.

$ [ ] , 000

Question 7

Aldsa Co manufactures and sells one product which requires 8 kg of raw materials in its manufacture. The following budgeted information relating to the next period is as follows:

	Units
Sales	19,000
Opening inventory of finished goods	4,000
Closing inventory of finished goods	3,000
	Kg
Opening inventory of raw materials	50,000
Closing inventory of raw materials	53,000

Calculate the budgeted raw material purchases for the next period.

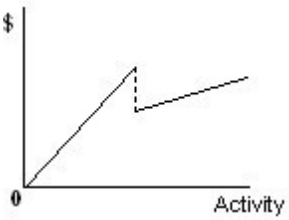
[ ] kg

Question 8

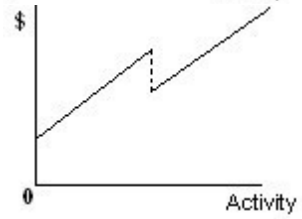
Up to a given level of activity in each period the purchase price per unit of a raw material is constant. After that point, a lower price per unit applies both to further units purchased and also retrospectively to all units already purchased.

Which of the following graphs depicts the total cost of the raw materials for a period?

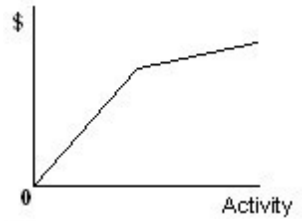
A



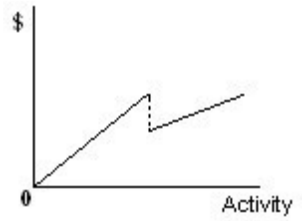
B



C



D



Question 9

Which TWO of the following are benefits of budgeting?

A It helps coordinate the activities of different departments
B It fulfils legal reporting obligations
C It establishes a system of control
D It is a starting point for strategic planning

Question 10

The following data extract is available for Cyclone Co for the month of June:

	Fixed budget	Actual results
Production and sales units	15,000	16,700
Direct materials	$180,000	$208,750

What is the direct material total variance for June?

A $28,750 Adverse
B $8,350 Adverse
C $28,750 Favourable
D $8,350 Favourable

Question 11

Gemini Co is preparing its budget for 20X0. It has established a trend equation for monthly sales revenue of R = 30,000M + 44,000, where R = sales revenue and M = month, with January 20X0 being treated as Month 0, February 20X0 treated as Month 1 etc.

The seasonal variation for December 20X0, using the multiplicative model, is 1.05.

What would be the forecast sales revenue for December 20X0 (to the nearest $'000)?

A $356,000
B $385,000
C $393,000
D $424,000

Question 12

Berner Co has calculated a $10,000 adverse direct material variance by subtracting its flexed budget direct material cost from its actual direct material cost for the period.

Which TWO of the following could have caused the variance?

A An increase in direct material prices
B An increase in raw material usage per unit
C Units produced being greater than budgeted
D Units sold being greater than budgeted

Question 13

Kerre Co, a manufacturing company, has total costs of $125,000 at 500 units of production and total costs of $180,000 at 1,000 units of production. Fixed costs increase by $5,000 at 800 units of production.

Calculate the percentage increase of fixed costs at 800 units of production, to one decimal place.

[ ]%

Question 14

All sales for Murrin Co are on credit. The budget for a period includes:

Sales revenue	$724,000
Opening trade receivables	$206,900
Closing trade receivables	$241,600

$4,360 of the opening trade receivables are budgeted to be written off as irrecoverable debt during the period.

What are the budgeted cash receipts from sales in the period?

A $684,940
B $689,300
C $754,340
D $758,700

Question 15

Select which of the characteristics of big data each of the following statements relate to.

		Variety	Volume	Veracity	Value
1.	Data selected from a population of items may be inaccurate				
2.	Data collected includes texts, photographs, emojis and videos				

Question 16

Pinsay Co's operating costs are 60% variable and 40% fixed.

Which of the following variances' values would change if Pinsay Co switched from standard marginal costing to standard absorption costing?

A Direct material efficiency variance
B Variable overhead efficiency variance
C Sales volume variance
D Fixed overhead expenditure variance

Question 17

Vitora Co is a manufacturing company with a capacity of 10,000 units. Its flexed production cost budget is as follows:

Capacity	60%	100%
Total production costs	$11,280	$15,120

Calculate the budgeted total production cost if Vitora Co operates at 85% capacity.

$ ☐

Question 18

Using an interest rate of 10% per year the net present value (NPV) of a project has been correctly calculated as $50. If the interest rate is increased by 1% the NPV of the project falls by $20.

What is the internal rate of return (IRR) of the project?

A 7.5%
B 11.7%
C 12.5%
D 20.0%

Question 19

Burra Co is considering investing $20,000 now in order to receive 10 annual sums of $4,000 (commencing in one year's time). Burra Co uses a cost of capital of 12%. The annuity factor for 12% over 10 years is 5.65.

What is the net present value of the investment?

A $2,600 Positive
B $2,600 Negative
C $20,000 Positive
D $22,600 Positive

Question 20

Jlup Co uses job costing and uses a standard profit mark-up of 20% on total cost to calculate selling price. The selling price of Job AM is $672 and the fixed overhead cost of the job is $340.

What is the total variable cost for Job AM?

A $164
B $220
C $277
D $560

Question 21

Which TWO of the following statements about the principal budget factor are TRUE?

A It restricts the performance of an organisation for a given period
B It is the lowest level of sales that an organisation can achieve in the budget period
C It affects the order in which an organisation prepares its budgets
D It dictates the minimum levels of budgeted production possible

Question 22

Cruin Co uses marginal costing. The following variances occurred in the last period when the actual operating profit was $40,000.

Materials	$900 adverse
Labour	$1,000 favourable
Overheads	$700 adverse
Sales price	$500 favourable
Sales volume contribution	$900 favourable

What was the budgeted operating profit for the last period?

A $41,500
B $40,800
C $38,500
D $39,200

Question 23

Select whether each of the following statements about the uses of big data analytics in organisations is true or false.

		True	False
1.	It helps to better understand customer behaviour and preferences		
2.	It helps to analyse the efficiency of business processes in real time		

Question 24

Camel Co plans to make an immediate investment of $100,000 in a new product. The product's net cash flows are expected to be as follows.

Year	**1**	**2**	**3**	**4**	**5**
	$	**$**	**$**	**$**	**$**
	35,000	45,000	60,000	75,000	80,000

Camel Co uses a cost of capital of 10%.

Calculate the discounted payback period (to the nearest 0.1 years).

[ ] **years**

Question 25

Tava Co manufactures and sells a single product. In two consecutive months the following levels of production and sales (in units) occurred:

	Month 1	Month 2
Sales	3,800	4,400
Production	3,900	4,200

The opening inventory for Month 1 was 400 units. Profits or losses have been calculated for each month using both absorption and marginal costing principles.

Which of the following combinations of profits and losses for the two months is consistent with the above data?

A	Absorption costing profit/(loss) Month 1: $200 Month 2: $4,400	Marginal costing profit/(loss) Month 1: $(400) Month 2: $3,200
B	Absorption costing profit/(loss) Month 1: $(400) Month 2: $4,400	Marginal costing profit/(loss) Month 1: $200 Month 2:$3,200
C	Absorption costing profit/(loss) Month 1: $200 Month 2: $3,200	Marginal costing profit/(loss) Month 1: $(400) Month 2: $4,400
D	Absorption costing profit/(loss) Month 1: $(400) Month 2: $3,200	Marginal costing profit/(loss) Month 1: $200 Month 2: $4,400

Question 26

The following statements relate to the advantages that linear regression analysis has over the high-low method in the analysis of cost behaviour:

(1) The reliability of the analysis can be statistically tested
(2) It takes into account all of the data
(3) It assumes linear cost behaviour

Which of the above statements is/are TRUE?

A 1 only
B 1 and 2 only
C 2 and 3 only
D 1, 2 and 3

Question 27

Select the MOST appropriate type of responsibility centre for each of the following activities.

		Cost centre	Revenue centre	Profit centre	Investment centre
1.	The research and development function of a pharmaceutical company				
2.	A shop located within a factory building which sells directly to the public				

Question 28

Sdale Co manufactures a variety of components which are sold to the automotive industry. Machine hours is the limiting factor, which prevents production of all component requirements, but this can be overcome by buying in any quantity of any component from external suppliers.

Which of the following should be the basis for deciding which component would be the best to buy-in to minimise costs?

A Contribution per unit
B Profit per machine hour
C Saving per unit by manufacturing rather than buying-in
D Saving per machine hour by manufacturing rather than buying-in

Question 29

Avlu Co operates a piecework system of remuneration but also guarantees its employees 80% of a time- based rate of pay which is based on $20 per hour for an eight-hour working day. Three minutes is the standard time allowed per unit of output. Piecework is paid at the rate of $18 per standard hour.

If an employee produces 200 units in eight hours on a particular day, calculate the employee's gross pay for that day.

$ ☐

Question 30

Harr Co uses an overhead absorption rate (OAR) of $3.50 per machine hour, based on 32,000 budgeted machine hours for the period. During the same period, the actual total overhead expenditure amounted to $108,875 and 30,000 machine hours were recorded on actual production.

What amount was the total overhead under or over absorbed by for the period?

A Under-absorbed by $3,875
B Under-absorbed by $7,000
C Over-absorbed by $3,875
D Over-absorbed by $7,000

Question 31

Which TWO of the following are assumptions made in cost-volume-profit (CVP) analysis?

A Selling price per unit will change during a period
B The volume of units sold will remain constant each period
C Total fixed costs will remain constant during a period
D Variable cost per unit will remain constant during a period

Question 32

Stour Co's sales in the last year in its three different markets were as follows:

	$
Market 1	100,000
Market 2	149,000
Market 3	51,000
Total	**300,000**

In a pie chart representing the proportion of sales made in each market, what would be the angle of the section representing Market 3 (to the nearest whole number)?

A 17 degrees
B 50 degrees
C 61 degrees
D 120 degrees

Question 33

The following statements refer to different types of planning in a large organisation:

(1) Strategic planning is concerned with both quantitative and qualitative matters
(2) Tactical planning is concerned with setting long term objectives
(3) Operational planning is concerned with a time horizon starting one year from now

Which of the above statements is/are CORRECT?

A 1 only
B 1 and 2
C 2 and 3
D 3 only

Question 34

The purchase price of an inventory item is $25 per unit. In each three-month period the usage of the item is 20,000 units. The annual holding costs associated with one unit equate to 6% of its purchase price. The cost of placing an order for the item is $20.

Calculate the economic order quantity (EOQ) for the inventory item (to the nearest whole unit).

[ ]

Question 35

The results of a business management examination are normally distributed with a mean score of 56 and a standard deviation of 12.

Calculate the percentage probability that a student will score more than 80 (to two decimal places).

[ ] %

Section B

Question 36

Cab Co owns and runs 350 taxis and earned sales revenue of $10 million in the last year. Cab Co is considering introducing a new computerised taxi tracking system.

The expected costs and benefits of the new computerised tracking system are as follows:

(1) The system would cost $2,100,000 to implement.
(2) Depreciation would be $420,000 per year.
(3) $75,000 has already been spent on staff training in order to evaluate the potential of the new system. Further training costs of $425,000 would be required in the first year if the new system is implemented.
(4) Sales are expected to rise to $11 million in Year 1 if the new system is implemented, thereafter increasing by 5% per year. If the new system is not implemented, sales would be expected to increase by $200,000 per year.
(5) Despite increased sales, savings in vehicle running costs are expected as a result of the new system. These are estimated at 1% of total sales.
(6) Six new members of staff would be recruited to manage the new system at a total cost of $120,000 per year.
(7) Cab Co would have to take out a maintenance contract for the new system at a cost of $75,000 per year for five years.
(8) Interest on money borrowed to finance the project would cost $150,000 per year.
(9) Cab Co's cost of capital is 10% per year.

Task 1

In order to determine whether a computerised tracking system should be introduced, select whether each of the following is a relevant or an irrelevant cost for a net present value (NPV) evaluation.

	Relevant	Irrelevant
Computerised tracking system investment of $2,100,000		
Depreciation of $420,000 in each of the five years		
Staff training costs of $425,000		
New staff total salary of $120,000 per year		
Staff training costs of $75,000		
Interest cost of $150,000 per year		

Task 2

Complete the following email in relation to the computerised tracking system. You will be required to enter numerical values directly into the highlighted cells.

To: CFO@cabco.com

From: accountant@cabco.com

Subject: Computerised tracking system

Hello,

I hope you are well. Here are the following values you requested if we implement the computerised tracking system.

The incremental sales in Year 1 will be $ [ ].

The savings in vehicle running costs in Year 1 will be $ [ ].

The present value of the maintenance costs over the life of the contract will be

$ [ ] (to the nearest $'000).

I hope this information is useful.

Kind regards

Task 3

Cab Co wishes to maximise the wealth of its shareholders. It has correctly calculated the following measures for the proposed computerised tracking system project.

- The internal rate of return (IRR) is 14%
- The return on average capital employed (ROCE) is 20%
- The payback period is four years

Which of the following statements is TRUE?

A The project is worthwhile because the IRR is a positive value
B The project is worthwhile because the IRR is greater than the cost of capital
C The project is not worthwhile because the IRR is less than the ROCE
D The project is not worthwhile because the payback is less than five years

Question 37

Castilda Co manufactures toy robots. The company operates a standard marginal costing system and values inventory at standard cost.

The following is an extract of a spreadsheet for calculating variances.

	A	B	C	D
1	**Standard Cost Card - Toy Robot**	**$ per robot**		
2	Selling price	120		
3	Direct material (1 kg of material per unit)	20		
4	Direct labour (6 hours at $8 per hour)	48		
5	Production overhead	24		
6	Standard contribution	**28**		
7				
8	**Actual and budgeted activity levels (units)**	**Budget**	**Actual**	
9	Sales	25,000	25,600	
10	Production	25,000	26,000	
11				
12	**Actual sales and variable costs**	**$**		
13	Sales	3,066,880		
14	Direct materials (purchased and used)	532,800		
15	Direct labour (150,000 hours)	1,221,000		
16	Variable production overhead	614,000		
17				
18	**Variances**	**$**		
19	Total direct materials variance	12,800	Adv	
20	Direct labour rate variance	21,000	Adv	
21	Direct labour efficiency variance	48,000	Fav	
22	Total variable production overhead variance	10,000	Fav	

Task 1

Which of the following formulas will CORRECTLY calculate the direct labour efficiency variance in cell B21?

A =(C10*B4)-(150,000*8)
B =B15-(C9*B4)
C =(B9*B4)-B15
D =(150,000-(C9*6))*8

Task 2

Castilda Co uses a standard cost operating statement to reconcile budgeted contribution with actual contribution. A standard cost operating statement for Month 1 is given below with some information missing.

Complete the reconciliation for the standard cost operating statement for Month 1 below. You will be required to either enter numerical values directly into the highlighted cells or select the correct option from a dropdown list.

	A	B	C	D	E	F
1	**Standard cost operating statement (Month 1)**					
2		**$**		**$**		
3	Budgeted contribution			700,000		
4						
5	Standard contribution on actual sales					
6	Sales price variance					
7				**711,680**		
8	Cost variances					
9	Total direct materials variance	12,800	Adv			
10	Direct labour rate variance	21,000	Adv			
11	Direct labour efficiency variance	48,000	Fav			
12	Total variable production overhead variance	10,000	Fav			
13				24,200	Fav	
14	Actual contribution			**735,880**		
15						

The following are the options to select from for the relevant highlighted cells where a dropdown list is provided:

Missing description in cell A4:

1. Total sales variance
2. Sales volume variance
3. Fixed overhead volume variance

Missing descriptor in cell E4

1. Fav
2. Adv

Missing descriptor in cell E6:

1. Fav
2. Adv

Task 3

Castilda Co's management accountant thinks that the direct labour rate and efficiency variances for Month 1 could be interrelated.

Which TWO of the following could explain the interrelationship between the variances?

A Higher grade labour performed tasks more efficiently
B Lower grade labour performed tasks less efficiently
C A productivity bonus was paid to direct labour
D Actual production was less than budgeted

Question 38

The assistant management accountant of Grove Co has started to prepare the annual budgets for 20X2. She has prepared the sales budget for the first two quarters and the purchases budget for the first quarter.

	January	February	March	April	May	June
	$	$	$	$	$	$
Sales	250,800	264,000	279,040	282,400	295,200	308,000
Purchases of raw materials	104,600	110,200	108,000			

The budgeted sales price for the single product is $80.

25% of monthly sales are cash sales. The other 75% of sales are credit sales, of which, 50% are expected to be settled in the month after sale and 45% are expected to be settled two months after sale. The remaining 5% are expected to be irrecoverable debts.

The level of finished goods in inventory should be 40% of the next month's sales quantities.

The budget assumes that all suppliers will be paid in the month after purchase. Grove Co's main supplier, Meteor Co has offered Grove Co a discount of 3% if payments are made within the month of purchase. Grove Co buys 20% of its supplies from Meteor Co.

In March Grove Co intends to buy three vans for $11,000 each. The purchase will partly be funded by the sale of five vans for $5,000 each. The profit on the sales will be $500 per van. The monthly depreciation charge in relation to the vans held by the business in March will be $2,000.

Task 1

Calculate the budgeted sales receipts in June (to the nearest $'000).

$ ☐

Task 2

Complete the following statement by selecting the correct option.

Budgeted production in May is [ ] units

The following are the options to select from:

1. 3,754
2. 3,626
3. 3,850
4. 3,530

Task 3

Calculate the budgeted payment for purchases of raw materials in March, assuming the discount from Meteor Co is taken from January onwards.

$ [ ]

Task 4

Complete the following statement by selecting the correct option.

The net cash payment relating to vans in the cash budget for March is $ [ ]

The following are the options to select from:

1. 8,000
2. 10,000
3. 30,500
4. 28,500

Task 5

Which TWO of the following are disadvantages of using linear regression to forecast sales revenue?

A Personal judgement is required to calculate the trend line
B The forecast trend may not be reliable if it is based on a small amount of data
C It uses past data which may not be reliable for forecasting the future
D It is not possible to calculate how much of the change in one variable is explained by the change in another