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Management Accounting

Cima P1

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Topic Break Down

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Topic 1, Cost accounting for decision and control	134
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Total	380

QUESTION NO: 1 - (SIMULATION)

The following 5 statements apply the principles of either, both or neither absorption costing and marginal costing.

Place the option labels against the relevant statements.

ANSWER: See the explanation for the answer

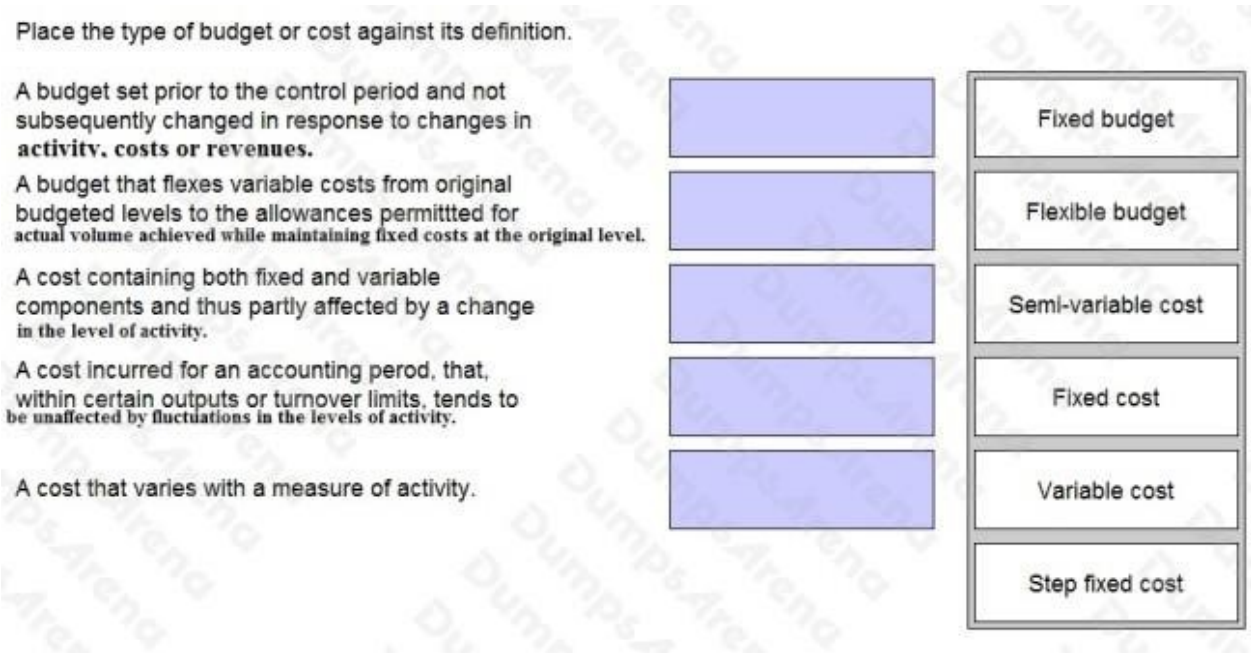
Explanation:

The five statements and the available option labels are not included in the supplied JSON, so it is not possible to assign each statement to **absorption costing**, **marginal costing**, **both**, or **neither**.

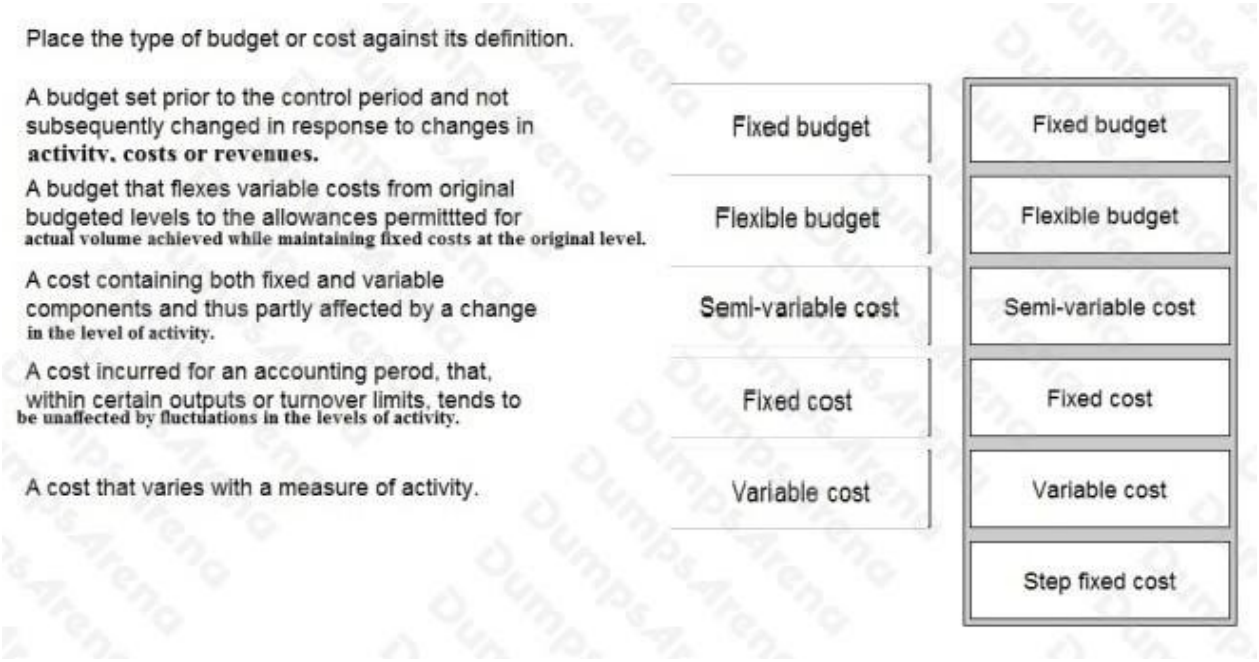
Please provide the five statements (and any option labels shown in the simulation) to determine the required placements.

QUESTION NO: 2 - (DRAG DROP)

Place the type of budget or cost against its definition.



ANSWER:



Explanation:

A fixed budget is prepared for a single assumed level of activity before the period begins. Its figures are not revised merely because actual output, sales volume, costs or revenues differ from the original assumption. A flexible budget, by contrast, is designed to restate budgeted variable costs for the actual level of activity achieved, while the fixed-cost element is retained at the amount applicable to the original relevant range. This makes it suitable for comparing actual results with a budget on a consistent activity basis.

A semi-variable cost contains both a fixed base amount and a variable amount that moves with activity. The fixed element is incurred regardless of short-run volume changes, whereas the variable element changes as activity changes. A fixed cost remains constant for an accounting period provided activity stays within the relevant output or turnover range. A variable cost changes in total in response to a measurable activity driver, such as units produced, labour hours or machine hours. These cost-behaviour concepts support budgeting, variance analysis and decision-making. The terminology and treatment are consistent with the budgeting and cost-behaviour guidance discussed by ACCA's budgeting technical resources.

QUESTION NO: 3

A medium-sized manufacturing company, which operates in the electronics industry, has employed a firm of consultants to carry out a review of the company's planning and control systems. The company presently uses a traditional incremental budgeting system and the inventory management system is based on economic order quantities (EOQ) and reorder levels. The company's normal production patterns have changed significantly over the previous few years as a result of increasing demand for customized products. This has resulted in shorter production runs and difficulties with production and resource planning.

The consultants have recommended the implementation of activity based budgeting and a manufacturing resource planning system to improve planning and resource management.

Select ALL the benefits for the company that could occur following the introduction of an activity based budgeting system.

A. Under an activity based budgeting system, resource allocation is linked to the strategic plan is prepared after considering alternative strategies. This approach ensures that new activities that are required to meet the company's strategic objectives are included in the budget.

B. Under an activity based budgeting system the focus is on existing resources and operations. Adjustments are then made for changes in activity and price which results in past inefficiencies being perpetuated. Under a traditional budgeting system, only resources that are needed to perform activities required to meet the budgeted production and sales volumes are included.

C. Activity based techniques including activity based budgeting focus on the outputs of a process rather than the input to the process. This approach provides a clear framework for understanding the link between costs and the level of activity. It allows the ranking of activities and the determination of how limited resources should be allocated across competing activities.

D. ABB systems present costs under functional headings i.e. the emphasis is on the nature of the cost. The weakness of this approach is that it gives little indication of the link between the level of activity and the cost incurred.

E. The approach under an activity based system is to make arbitrary cuts in order to meet overall financial targets.

F. Activity based budgeting allows the identification of value added and non-value added activities and ensures that cuts are made to non-value added activities. ABB is also useful for review of capacity utilization.

ANSWER: A C F

Explanation:

Activity-based budgeting (ABB) starts with the forecast demand for products and services, identifies the activities needed to satisfy that demand, and then determines the resources and costs required for those activities. This makes it particularly useful where product mix, production-run lengths and support-resource demands are changing. “Under an activity based budgeting system, resource allocation is linked to the strategic plan is prepared after considering alternative strategies. This approach ensures that new activities that are required to meet the company’s strategic objectives are included in the budget.” reflects ABB’s ability to align planned activities and resource needs with the organisation’s strategic direction rather than merely extending historic departmental spending.

“Activity based techniques including activity based budgeting focus on the outputs of a process rather than the input to the process. This approach provides a clear framework for understanding the link between costs and the level of activity. It allows the ranking of activities and the determination of how limited resources should be allocated across competing activities.” is also a benefit because ABB makes cost drivers visible and supports informed prioritisation when capacity or funding is constrained.

“Activity based budgeting allows the identification of value added and non-value added activities and ensures that cuts are made to non-value added activities. ABB is also useful for review of capacity utilization.” captures ABB’s role in highlighting activities for value analysis and in assessing whether available resources and capacity are being used effectively. See the CIMA Professional Qualification and ACCA’s budgeting technical resources.

QUESTION NO: 4 - (SIMULATION)

A company has identified the trend in its sales figures through the regression equation Y = 65.9 + 3.86X, where Y is the sales revenue in thousands of dollars and X is the month number. The average seasonal variation for October is 87%

Calculate the forecast sales revenue for October of Year 6.

Give your answer to the nearest $000.

ANSWER: See the explanation for the answer

Explanation:

Forecast sales revenue for October of Year 6 = $292,000 (nearest $000).

October in Year 6 is month:

$(5 \times 12) + 10 = 70$

Calculate the trend sales revenue (in $000):

$Y = 65.9 + (3.86 \times 70) = 336.1$

Apply October's seasonal variation of 87%:

$336.1 \times 0.87 = 292.407$ ($000)

Rounded to the nearest $000, this is **$292,000**.

QUESTION NO: 5

RST is preparing a quotation, on a relevant cost basis, for a special order.

Which TWO of the following are relevant costs that should be included in the quotation?

A. $2,000 disposal costs which would be saved when obsolete materials are used for the special order.

B. The cost of a manager who is seconded from a different division to manage the special order. The manager is paid a fixed salary.

C. Depreciation charges relating to equipment that will be used on the special order.

D. The reduction in the resale value of machinery, due to be sold immediately, but now to be used to produce the special order.

E. The cost of materials, as determined by the inventory system, that are currently in inventory but are used regularly on other products.

ANSWER: A D

Explanation:

Relevant costing includes only future cash flows that arise specifically because the special order is accepted, including cash flows that are avoided or benefits forgone as a consequence of the decision. “$2,000 disposal costs which would be saved when obsolete materials are used for the special order.” is relevant because using the materials avoids a future disposal payment. The saving is an incremental financial benefit of accepting the order and should therefore reduce the net relevant cost of the quotation.

“The reduction in the resale value of machinery, due to be sold immediately, but now to be used to produce the special order.” is also relevant. Using the machinery changes the proceeds that could otherwise be obtained from its immediate sale. That lost value is an opportunity cost: it represents a future benefit sacrificed in order to fulfil the order. It must be included so that the quotation reflects the full economic sacrifice associated with committing the machinery to production.

This treatment follows the relevant-cost principle that decision-making should reflect incremental cash consequences and opportunity costs, rather than accounting allocations. See the ACCA guidance on relevant costs and CIMA Professional Qualification resources.

QUESTION NO: 6

Company X is deciding which of Projects A, B or C to undertake. The profit earned from each of the projects is dependent on economic conditions.

The table below details the profit for each of the possible outcomes and the expected value of each of the projects.

What is the maximum amount that should be paid for perfect information about the economic conditions?

A. $442.50

B. $497

C. $54.50

D. $57.50

ANSWER: C

Explanation:

$54.50 is the maximum rational payment for perfect information, because this is the expected value of perfect information (EVPI). EVPI measures the incremental expected profit obtainable when the economic condition is known before selecting a project. It is calculated by first identifying, for each possible economic condition, the project with the highest profit. Each of those conditional maximum profits is multiplied by the probability of its respective condition, and the results are added to obtain the expected value with perfect information (EVwPI). The expected value without perfect information is the highest expected value among Projects A, B and C, since that is the best decision available using current information. The

difference, EVwPI less the highest current expected value, is $54.50. Therefore, paying more than $54.50 would reduce expected profit relative to proceeding without the information; $54.50 is the break-even maximum. This applies the expected-value and decision-making approach assessed in CIMA Management Accounting. Further guidance on CIMA's professional qualification and learning resources is available from the CGMA Study Hub. A useful overview of expected-value decision analysis is provided by OpenStax.

QUESTION NO: 7

EFG is a small business making raspberry jam to sell at local markets. It has recently been approached by a major supermarket to produce a special order for the supply of lemon curd.

Two of the ingredients required are sugar and preservatives, both of which are in inventory.

The sugar has a historic cost of $4 per kg and a replacement cost of $5. It is in regular use for the production of the raspberry jam.

The factory has switched to organic processes and the preservatives are no longer required.

The historic cost of the preservatives was $3 per kg and the replacement cost is $2.50 per kg.

The preservatives can be re-sold to a local competitor for $1 per kg if they are not used in this order.

Which TWO of the following should be included in determining the relevant cost of the special order?

A. Sugar at $4 per kg

B. Sugar at $5 per kg

C. Preservatives at $3 per kg

D. Preservatives at $1 per kg

E. Preservatives at $2.50 per kg

ANSWER: B D

Explanation:

Relevant costing considers only future cash flows that will change as a direct result of accepting the special order. For sugar, the appropriate amount is **Sugar at $5 per kg**. Sugar is regularly used in EFG's normal raspberry-jam production, so using inventory for the lemon-curd order creates a need to replace that sugar for normal operations. Its relevant cost is therefore its current replacement cost of $5 per kg: this represents the future cash outflow caused by consuming it on the order.

For the preservatives, the appropriate amount is **Preservatives at $1 per kg**. They are no longer needed for EFG's own production after the move to organic processes, but they can be sold to a competitor for $1 per kg. Using them in the special order means giving up that sale receipt. This forgone net cash inflow is the opportunity cost of consumption and is consequently relevant to the decision. The treatment applies the core management-accounting principle that relevant costs include incremental cash flows and opportunity costs. CIMA's P1 syllabus includes decision-making techniques and the use of relevant costs in short-term decisions; see the CIMA Professional Qualification syllabus. Further practical guidance on relevant-cost principles is available from ACCA's relevant costs technical article.

QUESTION NO: 8

Which of the following statements about total quality management are incorrect? Select ALL that apply.

A. The culture of an organisation should be to get things right the first time.

B. Everyone within an organisation should be involved in improving quality.

C. All costs relating to quality should be examined, particularly those relating to failure costs.

D. There is an acceptable quality level that an organisation must try to achieve.

E. The costs of conformance are more important than the costs of non-conformance.

F. The organisation should rely on inspection to achieve quality standards.

ANSWER: D E F

Explanation:

Total quality management (TQM) is a company-wide philosophy of continuously improving processes so that customer requirements are met consistently. “There is an acceptable quality level that an organisation must try to achieve” is incorrect because TQM promotes a zero-defects, right-first-time mindset and continuous improvement rather than treating a predetermined level of defects as satisfactory. This is an improvement direction and management philosophy, not a claim that defects can always be eliminated immediately.

“The costs of conformance are more important than the costs of non-conformance” is also incorrect. TQM requires managers to consider the full cost of quality, including prevention and appraisal expenditure as well as internal and external failure costs. The emphasis is on preventing defects and reducing the much wider operational and customer-related consequences of non-conformance.

“The organisation should rely on inspection to achieve quality standards” is incorrect because quality must be designed and built into processes. Inspection can identify defects, but TQM principally uses process control, employee involvement, root-cause analysis and prevention to avoid creating defects in the first place. This approach aligns with the quality-management principles of continual improvement and engagement of people described by ISO and the prevention-focused quality philosophy outlined by The Deming Institute.

QUESTION NO: 9

CDF is a manufacturing company within the DF group. CDF has been asked to provide a quotation for a contract for a new customer and is aware that this could lead to further orders. As a consequence, CDF will produce the quotation by using relevant costing instead of its usual method of full cost plus pricing. The following information has been obtained in relation to the contract: Material D 40 tons of material D would be required. This material is in regular use by CDF and has a current purchase price of $38 per ton. Currently, there are 5 tons in inventory which cost $35 per ton. The resale value of the material in inventory is $24 per ton.

Components 4,000 components would be required. These could be bought externally for $15 each or alternatively they could be supplied by RDF, another company within the DF manufacturing group. The variable cost of the component if it were manufactured by RDF would be $8 per unit, and RDF adds 30% to its variable cost to contribute to its fixed costs plus a further 20% to this total cost in order to set its internal transfer price. RDF has sufficient capacity to produce 2,500 components without affecting its ability to satisfy its own external customers. However, in order to make the extra 1,500 components required by CDF, RDF would have to forgo other external sales of $50,000 which have a contribution to sales ratio of 40%.

Labour hours 850 direct labour hours would be required. All direct labour within CDF is paid on an hourly basis with no guaranteed wage agreement. The grade of labour required is currently paid $10 per hour, but department W is already working at 100% capacity. Possible ways of overcoming this problem are: • Use workers in department Z, because it has sufficient capacity. These workers are paid $15 per hour. • Arrange for sub-contract workers to undertake some of the other work that is performed in department W. The sub-contract workers would cost $13 per hour.

Specialist machine The contract would require a specialist machine. The machine could be hired for $15,000 or it could be bought for $50,000. At the end of the contract if the machine were bought, it could be sold for $30,000. Alternatively, it could be modified at a cost of $5,000 and then used on other contracts instead of buying another essential machine that would cost $45,000. The operating costs of the machine are payable by CDF whether it hires or buys the machine. These costs would total $12,000 in respect of the new contract.

Supervisor The contract would be supervised by an existing manager who is paid an annual salary of $50,000 and has sufficient capacity to carry out this supervision. The manager would receive a bonus of $500 for the additional work.

Development time 15 hours of development time at a cost of $3,000 have already been worked in determining the resource requirements of the contract.

Fixed overhead absorption rate CDF uses an absorption rate of $20 per direct labour hour to recover its general fixed overhead costs. This includes $5 per hour for depreciation.

Calculate the relevant cost of the contract to CDF. You must present your answer in a schedule that clearly shows the relevant cost value for each of the items identified above. You should also explain each relevant cost value you have included in your schedule and why any values you have excluded are not relevant.

Ignore taxation and the time value of money.

Select all the true statements.

A. Machine operating costs is a relevant cost.

B. Development Cost is a relevant cost.

C. General fixed overhead costs are relevant costs.

D. Direct labour cist is a relevant cost

E. The total relevant cost was $84 990

F. The total relevant cost was $94 740

G. The total relevant cost was $104 320

H. The total relevant cost was $87,070.

ANSWER: A D H

Explanation:

Relevant costing includes only future cash flows that change as a direct consequence of accepting the contract, including opportunity costs. Machine operating costs of $12,000 are therefore relevant because they will be incurred for this contract regardless of whether the machine is hired or purchased. Direct labour is also relevant: department W is fully utilised, so the least-cost way to release its labour is to subcontract the displaced work at $13 per hour, giving $11,050 for 850 hours. The relevant-cost total is $87,070: material D is $1,520 (40 tons × current replacement cost of $38); components are $52,000, comprising $20,000 variable cost for the 2,500 spare-capacity units and $32,000 for the remaining units (variable cost plus $20,000 lost contribution); the machine's best net cost is $10,000, as purchase and modification avoids a $45,000 future replacement purchase; operating costs are $12,000; and the incremental supervisor bonus is $500. Relevant-cost analysis uses replacement cost for regularly used inventory and recognises the contribution forgone where capacity is constrained. It excludes sunk expenditure and costs that will not change. This treatment follows established relevant-cost and opportunity-cost principles described in ACCA's relevant costs guidance and the CIMA Professional Qualification syllabus.

QUESTION NO: 10

Which of the following statements regarding marginal and absorption costing are true in the context of pricing decisions?

Select ALL that apply.

A. Marginal costing is appropriate for long-term pricing decisions.

B. Marginal costing is appropriate for short-term pricing decisions.

C. Absorption costing when used for pricing decisions includes the 'total-cost' of the product.

D. Marginal costing ensures the recovery of all costs incurred in selling prices.

E. Marginal costing is more appropriate for use in one-off pricing decisions.

F. Absorption costing is more appropriate for use in one-off pricing decisions.

ANSWER: B C E

Explanation:

Marginal costing is appropriate for short-term pricing decisions because it focuses on the additional, relevant costs and revenues arising from a decision. Where capacity is available and the decision does not alter fixed costs, a price that exceeds the marginal (variable) cost produces a contribution towards fixed costs and profit. This makes marginal costing particularly useful for a short-run special order or other one-off opportunity, where the key issue is whether accepting the work improves overall profit rather than whether it recovers every cost in the business.

Marginal costing is more appropriate for use in one-off pricing decisions for the same reason: such decisions commonly concern incremental output, unused capacity, and costs that change specifically because the order is accepted. Decision-making should use relevant cash flows, which are future and incremental to the choice being evaluated.

Absorption costing when used for pricing decisions includes the 'total-cost' of the product because unit cost incorporates both variable production costs and an allocated share of fixed production overhead. A full-cost basis is therefore useful when setting prices intended to provide sustainable recovery of production costs over the longer term. The distinction between marginal and absorption costing, including fixed-overhead absorption, is covered in ACCA's marginal and absorption costing guidance; relevant-cost principles are also outlined in ACCA's relevant costs guidance.

QUESTION NO: 11

JKI is planning a golfing holiday for a group of wealthy lawyers.

The lawyers will fly to the local airport at their own expense. JKI will then pay for transport, accommodation and the use of the golf course (green fees).

JKI's costings are as follows, based on 28 participants:

	$
Revenues = $8,000 per participant	224,000
Cost of a classified advertisement in a law magazine	8,000
Coach hire (one 35 seat luxury coach)	2,500
Coach driver	800
Room and all meals at a luxury hotel - $600 per participant for 7 days	117,600
Green fees - $200 per participant for 7 days	39,200
Projected profit	55,900

JKI received 46 applications from potential participants.

What would the profit be if JKI accepted all of these bookings?

Give your answer to the nearest whole number.

A. $95800

ANSWER: A

Explanation:

The profit is **$95800**. The calculation must be redone for 46 participants rather than simply scaling up the profit originally estimated for 28 participants. Total income is obtained by applying the stated charge per participant to all 46 accepted bookings. Costs that arise for each attendee, including the accommodation and green-fee amounts shown in the costing schedule, must likewise be multiplied by 46. Transport must be assessed using the capacity and cost information in the schedule, so that JKI provides the required transport for the larger group rather than retaining the transport assumption used for 28 people. Costs that do not vary with the number of participants remain included once at their stated amount. Deducting the resulting total costs from the revenue for 46 bookings gives a profit of $95,800, rounded to the nearest whole number. This applies the management-accounting distinction between variable costs, which change with activity volume, and fixed or step costs, which may remain constant only within a relevant range. It is consistent with the cost-behaviour and decision-

making skills assessed in CIMA Management Accounting; see the CIMA Professional Qualification resources and the explanation of contribution-margin income statements.

QUESTION NO: 12

A manager has to decide between four mutually exclusive projects, A, B, C and D:

Project A	Project B	Project C	Project D
Probability	Profit	Probability	Profit
50%	$50,000	60%	$65,000
50%	$100,000	40%	$90,000
Expected Value	$75,000	Expected Value	$75,000

Using the above information, which Project would a risk seeking manager choose?

A. Project A

B. Project B

C. Project C

D. Project D

ANSWER: D

Explanation:

Project D is the appropriate choice for a risk-seeking manager. In project appraisal under risk and uncertainty, a risk seeker has a preference for variability in outcomes and is prepared to accept greater uncertainty in return for the possibility of a more favourable payoff. The project information identifies Project D as having the risk profile that best suits this attitude: it offers the greatest exposure to the more extreme potential outcome(s), rather than concentrating value in relatively certain outcomes. Therefore, when the projects are mutually exclusive and the decision is made specifically according to a risk-seeking preference, Project D is selected.

This is distinct from simply choosing on expected value alone. Expected value is a probability-weighted average and is useful for informing a decision, but the manager's attitude to risk affects how they value the distribution of possible outcomes around that average. A risk-seeking decision-maker gives positive weight to the opportunity associated with higher dispersion and the potential upside. This treatment of risk preferences and decision-making under uncertainty is consistent with the Management Accounting content assessed within the CIMA Professional Qualification; see CIMA Professional Qualification and CIMA's wider AICPA & CIMA resource centre.

QUESTION NO: 13

When preparing data for a short term decision, which THREE of the following are relevant costs?

A. Differential costs

B. Incremental cost

C. Unavoidable costs

D. Opportunity costs

E. Committed costs

ANSWER: A B D

Explanation:

Relevant costs for a short-term decision are future cash flows that differ between the available alternatives. **Differential costs** are relevant because they measure the total difference in cost between choices, such as producing internally rather than buying from an external supplier. This comparison identifies the cash-flow effect attributable to selecting one course of action instead of another.

Incremental cost is also relevant because it represents the additional cost caused by undertaking a particular activity, accepting an order, or choosing a proposal. It is therefore directly useful when assessing the financial consequence of the decision.

Opportunity costs are relevant because choosing one alternative can mean giving up a benefit that could have been earned from the next best use of scarce resources. Although an opportunity cost may not be recorded in the accounting system as a cash expense, it is an economic sacrifice resulting from the decision and should be included in the decision analysis. These principles ensure that management focuses on costs and benefits that will change as a consequence of the choice. See OpenStax: Identify Relevant Information for Decision-Making and ACCA: Relevant Costs.

QUESTION NO: 14

'Public sector organizations are often judged by their economy, efficiency and effectiveness. Consequently, they should use an approach to budgeting other than incremental budgeting.'

Required:

Explain ONE advantage and TWO disadvantages of public sector organizations using incremental budgeting.

Select all true statements.

A. An incremental; approach is not as easy and fast to implement than other forms of budgeting approaches e.g. zero based budgeting.

B. Public sector organizations tend to be fairly complex and in many cases outputs cannot be measured in monetary terms therefore the link between inputs and outputs is difficult to establish. An incremental approach can therefore provide a cost effective approach to budgeting.

C. Under an incremental approach to budgeting, existing operations and the current budgeted allowance for these existing activities are taken as the base level for preparing the budget.

D. The main advantage of incremental budgeting is that the cost of past activities becomes fixed and any inefficiencies or wastage is perpetuated.

E. The incremental approach means that budget holders in public sector organizations will be encouraged to use up this year's budget will be as high as possible.

F. The incremental approach encourages managers in public sector organizations to look at the efficiency and effectiveness of activities undertaken.

ANSWER: B C E

Explanation:

Public sector organisations frequently provide services for which outputs and outcomes are difficult to express in monetary terms, such as public safety, social care, or environmental protection. Detailed reassessment of every activity can therefore be costly and may rely on subjective assumptions. "Public sector organizations tend to be fairly complex and in many cases outputs cannot be measured in monetary terms therefore the link between inputs and outputs is difficult to establish. An incremental approach can therefore provide a cost effective approach to budgeting." is a valid advantage because it provides a practical, relatively low-cost starting point for annual resource allocation.

"Under an incremental approach to budgeting, existing operations and the current budgeted allowance for these existing activities are taken as the base level for preparing the budget." accurately describes the method: prior-period spending is the base, with adjustments for expected changes. This feature also underlies its weaknesses. "The incremental approach means

that budget holders in public sector organizations will be encouraged to use up this year's budget will be as high as possible." identifies the year-end spending incentive that can arise when future funding is perceived to depend on current expenditure. Incremental budgeting can consequently embed historical spending patterns rather than requiring systematic challenge of economy, efficiency, and effectiveness. CIMA's P1 syllabus includes budgeting approaches and public-sector performance considerations; see CIMA Professional Qualification Syllabus and the CIMA study resources.

QUESTION NO: 15 - (DRAG DROP)

A company is choosing between three projects, Project L, Project M and Project N using minimax regret. The outcome from each project is dependent on competitor reaction. If this is passive returns will be L $4,000, M $3,500 and N $5,200. If it is aggressive returns will be L $3,200, M $2,800 and N $2,950. Place the tokens into the table to show the maximum regret for each project and whether the project would be undertaken using minimax regret.

	Maximum Regret	Project undertaken
Project L		
Project M		
Project N		

Maximum Regret
$1,200
$400
$250
$1,700

Project undertaken
Yes
No

ANSWER:

	Maximum Regret	Project undertaken
Project L	$1,200	No
Project M	$1,700	No
Project N	$250	Yes

Maximum Regret
$1,200
$400
$250
$1,700

Project undertaken
Yes
No

Explanation:

Minimax regret evaluates each decision by considering the opportunity loss that could arise after the competitor's reaction becomes known. The calculation starts by identifying the best available return in each possible reaction state. With a passive competitor, the best return is $5,200. The regret for each project is the difference between this state's best return and the return earned by that project. This gives a regret of $1,200 for Project L, $1,700 for Project M, and zero for Project N in the passive state.

With an aggressive competitor, the best return is $3,200. Comparing each project's aggressive-state return with $3,200 gives zero regret for Project L, $400 for Project M, and $250 for Project N. Each project's maximum regret is then the larger of its regrets across the two possible competitor reactions. Accordingly, the maximum regrets are $1,200 for Project L, $1,700 for Project M, and $250 for Project N.

The minimax-regret rule chooses the decision with the lowest maximum possible regret, because it limits the largest opportunity loss that might be experienced. Project N has the smallest maximum regret, at $250, so it is the project that should be undertaken. The completed table is therefore correct: Project L is matched with $1,200 and No; Project M is matched with $1,700 and No; and Project N is matched with $250 and Yes. This follows the standard decision-making approach described in OpenLearn's decision-making material.

QUESTION NO: 16

Budgeted sales and production for Product X for this period are 12,000 units.

The standard cost and selling price for a single unit of the product are:

Sales and production	11,500 units
Fixed production overheads	$265,000
Direct labour	35,000 hours

The fixed production overhead expenditure variance is:

A. $13,000 A

B. $23,500 A

C. $20,000 A

D. $10,500 A

ANSWER: A

Explanation:

$13,000 A is correct. A fixed production overhead expenditure variance measures whether the actual fixed production overhead incurred differs from the fixed production overhead budget for the period. It is calculated using total monetary amounts: actual fixed production overhead less budgeted fixed production overhead. The budgeted sales and production volume of 12,000 units is used to establish the period's fixed-overhead budget from the standard information shown in the cost table. Comparing that budget with the actual fixed production overhead given produces a difference of $13,000. Because actual expenditure is higher than the budgeted amount, the variance is adverse.

This variance is concerned specifically with control of spending on fixed production resources, such as factory supervision, depreciation, rent, or other committed manufacturing costs. It does not assess whether the planned production volume was achieved; volume-related effects are reported separately through fixed overhead volume variances. This distinction is fundamental to standard costing and variance analysis: the expenditure variance isolates the price or spending outcome for fixed overhead, while the volume variance isolates the effect of using a different activity level from that budgeted. CIMA's management accounting syllabus includes standard costing and variance analysis as core techniques; see the CIMA Professional Qualification syllabus. A useful technical overview of fixed-overhead variances is also available from AccountingCoach.

QUESTION NO: 17

Explain why sensitivity analysis is useful when dealing with uncertainty in project

appraisal.

Select all the true statements.

A. Sensitivity analysis enables a company to determine the effect of changes to fixed costs on the planned outcome

B. Sensitivity analysis enables a company to determine the effect of changes to variables on the planned outcome

C. In project appraisal, an analysis can be made if all the key variables to ascertain by how much variable would need to change before the net present value (NPV) reaches zero i.e. the indifference point.

D. In project appraisal, in analysis can be made of all the key variables to ascertain by how much each variable would need to change before the net present value (NPV) reaches 100% i.e. the maximum point.

ANSWER: A B C

Explanation:

Sensitivity analysis is useful in project appraisal because it tests how vulnerable a project's planned financial result, normally its net present value, is to changes in assumptions used in the appraisal model. Fixed costs are one such assumption: changing forecast fixed operating costs changes future project cash flows and can therefore change the net present value. It is consequently valid to use sensitivity analysis to measure the effect of a change in fixed costs on the planned outcome.

More generally, sensitivity analysis changes an input variable while holding the other assumptions constant, allowing management to identify which estimates have the greatest influence on the project result. Relevant inputs can include sales volume, selling price, variable cost, fixed cost, initial investment, project life and the discount rate. This focuses attention on assumptions requiring stronger evidence, contingency planning or further investigation before committing funds.

For each key variable, the analysis may also calculate the amount by which that variable can change before the net present value falls to zero. This is the project's break-even or indifference point in present-value terms and provides a clear measure of the margin for error in the forecast. These uses support the CIMA project-appraisal learning objectives on evaluating uncertainty and risk. See the CIMA Professional Qualification and ACCA's investment appraisal guidance.

QUESTION NO: 18

The term 'budgetary slack' refers to the:

A. Lead time between the preparation of the functional budgets and the approval of the master budget by senior management

B. Difference between the budgeted output and the actual output

C. Difference between budgeted capacity utilization and full capacity

D. Intentional over estimation of costs and/or under estimation of revenue in a budget

ANSWER: D

Explanation:

Intentional over estimation of costs and/or under estimation of revenue in a budget is budgetary slack. It arises when a budget holder deliberately builds a margin into budget estimates, making the target easier to achieve than a realistic, unbiased forecast would be. For example, a manager may request more resources than genuinely expected to be needed, or forecast sales below the level they believe is attainable. The resulting gap gives the manager a cushion against adverse events and can increase the apparent likelihood of meeting performance targets. In management accounting, this behaviour is particularly relevant where budget achievement is used to evaluate managers or determine rewards, since those incentives can encourage managers to submit deliberately conservative estimates. Effective participative budgeting therefore requires review, challenge and comparison with operational evidence to ensure that submitted estimates remain realistic while retaining the benefits of input from operational managers. CIMA's management accounting syllabus identifies budgeting, budget setting and control as core topics, including the behavioural implications of budgetary control. See the CIMA Professional Qualification and CIMA's Professional Qualification syllabus.

QUESTION NO: 19

A medium-sized manufacturing company, which operates in the electronics industry, has employed a firm of consultants to carry out a review of the company's planning and control systems. The company presently uses a traditional incremental budgeting system and the inventory management system is based on economic order quantities (EOQ) and reorder levels. The company's normal production patterns have changed significantly over the previous few years as a result of increasing demand for customized products. This has resulted in shorter production runs and difficulties with production and resource planning. The consultants have recommended the implementation of activity based budgeting and a manufacturing resource planning system to improve planning and resource management.

What are the benefits for the company that could occur following the introduction of an activity based budgeting system?

Select ALL the correct answers.

A. Under an activity based budgeting system, resource allocation is linked to the strategic plan and is prepared after considering alternative strategies. This approach ensures that new activities that are required to meet the company's strategic objectives are included in the budget.

B. Under a traditional incremental budgeting system the focus is on existing resources and operations. Adjustments are then made for changes in activity and price which results in past inefficiencies being perpetuated. Under an activity based budgeting system, only resources that are needed to perform activities required to meet the budgeted production and sales volumes are included.

C. Activity based techniques including activity based budgeting focus on the outputs of a process rather than the input to the process. This approach provides a clear framework for understanding the link between costs and the level of activity. It allows the ranking of activities and the determination of how limited resources should be allocated across competing activities.

D. Activity Based Budgeting Systems present costs under functional headings i.e. the emphasis is on the nature of the cost. The weakness if this approach is that it gives little indication of the link between the level of activity and the cost incurred.

E. The approach under an Activity based Budgeting System is to make arbitrary cuts in order to meet overall financial targets.

ANSWER: A B C

Explanation:

Activity based budgeting starts with the budgeted demand for products and services, identifies the activities needed to satisfy that demand, and then determines the resources required to perform those activities. This gives the company a more responsive basis for planning than a budget built by adjusting historic departmental spending. In this case, where customised products and shorter production runs have changed the pattern of work, the approach helps managers budget for the activities actually required, such as production scheduling, set-ups, purchasing, quality control and order handling.

"Under an activity based budgeting system, resource allocation is linked to the strategic plan and is prepared after considering alternative strategies. This approach ensures that new activities that are required to meet the company's strategic objectives are included in the budget." is correct because activity analysis supports the translation of strategy into required work and resource capacity.

"Under a traditional incremental budgeting system the focus is on existing resources and operations. Adjustments are then made for changes in activity and price which results in past inefficiencies being perpetuated. Under an activity based budgeting system, only resources that are needed to perform activities required to meet the budgeted production and sales volumes are included." and "Activity based techniques including activity based budgeting focus on the outputs of a process rather than the input to the process. This approach provides a clear framework for understanding the link between costs and the level of activity. It allows the ranking of activities and the determination of how limited resources should be allocated across competing activities." correctly describe the activity, cost-driver and resource-allocation focus of ABB. See ACCA's activity-based budgeting guidance and the CIMA Professional Qualification resources.

QUESTION NO: 20

Which THREE of the following statements relating to fixed overhead variances are correct?

A. The total fixed overhead cost variance in an absorption costing system is the amount of fixed overhead that has been under- or over-absorbed in the period.

B. The total fixed overhead variance is made up of the fixed overhead expenditure variance, the fixed overhead efficiency variance and the fixed overhead capacity variance.

C. The fixed overhead volume variance can be split into the fixed overhead efficiency variance and the fixed overhead capacity variance.

D. The total fixed overhead cost variance in an absorption costing system is the difference between budgeted fixed overhead and actual fixed overhead incurred.

E. In a marginal costing operating statement reconciling budgeted contribution to actual profit only the fixed overhead expenditure variance and the fixed overhead volume variance are shown.

ANSWER: A B C

Explanation:

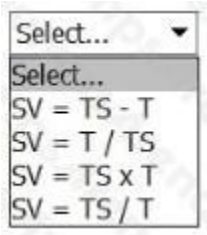
The total fixed overhead cost variance in an absorption-costing system represents the period's under- or over-absorption of fixed production overhead. Fixed overhead is absorbed into production using a predetermined rate, so the total variance compares the overhead absorbed by actual output with the fixed overhead actually incurred. This is why "The total fixed overhead cost variance in an absorption costing system is the amount of fixed overhead that has been under- or over-absorbed in the period" is correct.

The overall fixed overhead cost variance can be analysed into an expenditure element and a volume element. The expenditure variance measures the difference between actual fixed overhead expenditure and budgeted fixed overhead expenditure. The volume variance arises because actual output differs from the output level used to establish the absorption rate. In a more detailed analysis, this volume variance is subdivided into an efficiency variance, reflecting the relationship between output and hours worked, and a capacity variance, reflecting the difference between actual and budgeted hours worked. Accordingly, both "The total fixed overhead variance is made up of the fixed overhead expenditure variance, the fixed overhead efficiency variance and the fixed overhead capacity variance" and "The fixed overhead volume variance can be split into the fixed overhead efficiency variance and the fixed overhead capacity variance" correctly state the variance relationships. This framework is consistent with standard-costing variance analysis; see ACCA's standard costing guidance and OpenTuition's fixed-overhead variance notes.

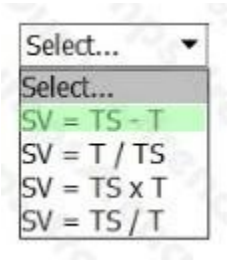
QUESTION NO: 21 - (HOTSPOT)

A time series (TS) is made up of two main components i.e. trend (T) and the seasonal variation (SV).

The equation that represents the seasonal variation under the additive model is:



ANSWER:



Explanation:

In an additive time-series model, the total observed value for a period is formed by adding the underlying trend to the seasonal variation. This relationship is written as TS = T + SV, where TS is the time-series value, T is the trend value, and SV is the seasonal variation. To calculate the seasonal variation, rearrange the equation by subtracting the trend from the observed time-series value. The resulting formula is SV = TS - T.

This approach treats the seasonal movement as an absolute amount. For example, if a particular month's observed value is 125 and its trend value is 110, the seasonal variation is 15. The same numerical seasonal adjustment can then be applied to trend values when estimating or forecasting values for equivalent seasonal periods. Additive decomposition is especially suitable when seasonal fluctuations remain broadly constant in size over time, rather than changing in proportion to the overall level of the series.

The selected expression therefore correctly isolates the seasonal component from the observed time-series value and its trend. This is the required rearrangement for the additive model. Further background on the use of additive seasonal decomposition is available from Forecasting: Principles and Practice — Classical decomposition.

QUESTION NO: 22

A company is considering whether to make a component internally or buy it from an external supplier.

The component is currently made using facilities that have no alternative use. The direct material and direct labour costs of making the component are $14 per unit. Fixed production overhead of $5 per unit is unavoidable.

The supplier has offered to supply the component for $16 per unit.

What is the relevant cost per unit of making the component?

A. $14 per unit

B. $16 per unit

C. $19 per unit

D. $5 per unit

ANSWER: A

Explanation:

The relevant cost of making the component is $14 per unit. Direct material and direct labour are assumed to be future cash costs that will be avoided if the component is bought externally. They are therefore relevant to the make-or-buy decision.

The fixed production overhead of $5 per unit is unavoidable, so it will be incurred whether the company makes or buys the component. It does not differ between the alternatives and must be excluded from the relevant-cost comparison. As the facilities have no alternative use, there is no opportunity cost of using them to manufacture the component. The relevant comparison is therefore $14 to make against $16 to buy. See OpenStax: Relevant Information for Decision-Making.

QUESTION NO: 23

200 units each of components F, G and H are required next period.

All three components are made by skilled labour of which only 4,000 hours are available.

An external supplier is able to supply any requirements of the components.

No inventories are held.

Data for the three components are as follows:

	Component F $ per unit	Component G $ per unit	Component H $ per unit
Incremental internal production cost	37	15	17
External supplier's price	48	28	23
Labour hours per unit	8	9	5

In order to minimise cost, how many units of component H should be purchased from the external supplier?

A. None

B. 80

C. 120

D. 200

ANSWER: B

Explanation:

80 is the cost-minimising quantity of component H to purchase. Where skilled labour hours are scarce, the make-or-buy decision is not based simply on which component has the lowest unit production cost. The available labour must be assigned to the components that generate the greatest saving from internal manufacture for each constrained skilled-labour hour used. This saving is the external purchase price less the relevant incremental cost of making the component, divided by the skilled-labour hours required per unit.

Applying that opportunity-cost ranking to the data allocates the 4,000 available skilled-labour hours first to the internally produced units with the highest saving per hour. After the requirements for the higher-ranked production are covered, enough capacity remains to manufacture 120 units of component H. Since total demand for H is 200 units and inventories are nil, the remaining 80 units must be obtained from the external supplier. Purchasing 80 units therefore ensures that all component requirements are met while the limited skilled-labour resource is used where it delivers the largest cost reduction.

This is a standard short-run relevant-cost and limiting-factor analysis: resource constraints create an opportunity cost, so decisions should maximise the benefit earned from each unit of the scarce resource. See CIMA Professional Qualification resources and OpenStax's management accounting discussion of decision-making information.

QUESTION NO: 24

A company is considering the use of Material V in a special order.

The material is used regularly and a sufficient quantity of the material is in inventory.

It could also be sold, at just below the current market price, to a local competitor.

What is the relevant cost of Material V to be used in the special contract?

A. The replacement cost of the material.

B. The resale value of the material.

C. The historic cost of the material in inventory.

D. Nil

ANSWER: A

Explanation:

The replacement cost of the material is the relevant cost because Material V is used regularly in the company's normal operations. Relevant costing focuses on future cash flows that will arise as a consequence of a decision, rather than amounts already paid. Although the material is currently held in inventory, using those units for the special contract will reduce the stock available for its continuing regular use. The business will therefore have to obtain replacement units in the future to maintain normal operations, and the cost of those replacement units is the incremental cash outflow caused by accepting the contract.

This treatment applies even though the inventory has a historic purchase cost, since that past expenditure cannot be changed by the current decision. The core management-accounting principle is to identify the economic sacrifice arising from committing a scarce resource to the contract. For an item that is routinely consumed and will need replenishment, that sacrifice is measured by its current replacement cost. This is consistent with CIMA's management-accounting focus on using relevant, decision-specific cost information for planning and decision-making; see the CGMA Competency Framework and the CIMA Professional Qualification overview.

QUESTION NO: 25

A company produces trays of pre-prepared meals that are sold to restaurants and food retailers. Three varieties of meals are sold: economy, premium and deluxe.

Extracts from the budget for last year are given below:

	Economy	*Premium*	*Deluxe*
Sales quantity (trays)	180,000	360,000	260,000
Selling price per tray	$2.80	$3.20	$4.49
Total sales revenue	$504,000	$1,152,000	$1,167,400
Direct material cost per tray	$1.00	$1.60	$2.20
Total direct material cost	$180,000	$576,000	$572,000
Direct labour cost per tray	$0.50	$0.50	$0.50
Total direct labour cost	$90,000	$180,000	$130,000

Overhead costs for the budget were estimated using the high-low method based on the total overhead costs for three previous years.

Output	720,000 trays	680,000 trays	840,000 trays
Total overheads	$1,016,000	$992,000	$1,096,000

	Economy	Premium	Deluxe
Sales quantity (trays)	186,000	396,000	278,000
Selling price per tray	$2.82	$3.21	$4.50
Total sales revenue	$524,520	$1,271,160	$1,251,000
Direct material cost per tray	$1.10	$1.50	$2.10
Total direct material cost	$204,600	$594,000	$583,800
Direct labour cost per tray	$0.52	$0.54	$0.48
Total direct labour cost	$96,720	$213,840	$133,440
Variable overhead per tray	$0.64	$0.66	$0.63
Total variable overheads	$119,040	$261,360	$175,140
Actual fixed overheads: $546,000			

The company operates a just-in-time system for purchasing and production and does not hold any inventory.

Ignore inflation.

Calculate, for the original budget, the budgeted fixed overhead costs, the budgeted variable overhead cost per tray and the budgeted total overheads costs.

A. The variable cost per tray = $0.75; The fixed cost = $ 490 000

B. The variable cost per tray = $0.65; The fixed cost = $ 550 000

C. The variable cost per tray = $0.45; The fixed cost = $ 320 000

D. The variable cost per tray = $0.85; The fixed cost = $ 530 000

ANSWER: B

Explanation:

The variable cost per tray = $0.65; The fixed cost = $ 550 000 is correct because budgeted overhead is analysed into its two cost-behaviour components: a fixed amount that remains unchanged within the relevant activity range and a variable amount that changes in direct proportion to the number of trays produced. The original-budget data therefore gives a fixed overhead intercept of $550,000 and a variable-overhead rate of $0.65 for each tray. These figures form the budgeted overhead equation: total overhead = $550,000 + ($0.65 × budgeted number of trays). Applying the equation to the original budget's total tray volume produces the required original-budget total overhead cost. This approach is important for planning and control because it separates the unavoidable capacity-related overhead from the incremental overhead caused by producing additional trays. It also permits a meaningful flexed budget to be prepared when actual output differs from original planned output. CIMA's management accounting resources cover budgeting and cost behaviour as core areas of the qualification; see CIMA study resources. Further guidance on classifying costs according to behaviour is available in OpenStax's managerial accounting text.

QUESTION NO: 26

A decision tree is being evaluated back to a decision point.

There are two alternatives at this point:

1. To abandon the project and generate a return of $435,000;

2. To continue with the project and generate the following possible returns:

What value should be included at the decision point?

A. $435,000

B. $451,000

C. $443,000

D. $720,000

ANSWER: B

Explanation:

The value included at a decision point is the value of the best available course of action after the values of all subsequent branches have been rolled back. For the abandonment alternative, the value is the certain return of $435,000. For continuing, the possible future returns must first be probability-weighted at the relevant chance node(s), producing an expected monetary value of $451,000. This expected value represents the value of choosing to continue at the decision point, before the uncertain outcome is known.

Decision-tree evaluation proceeds from right to left: calculate expected values at chance nodes, then at each decision node select the alternative with the greater value. Because $451,000 exceeds the $435,000 available from abandoning the project, $451,000 is the value carried back and recorded at this decision point. It reflects the economically preferred decision on an expected-value basis and is not a single possible payoff; it is the probability-weighted valuation of the continuation strategy. This use of relevant data, uncertainty and decision-making techniques is consistent with the management-accounting focus of the CIMA qualification: CIMA Professional Qualification and CGMA Competency Framework.

QUESTION NO: 27

In short-term decision making, which TWO of the following are relevant costs?

A. Sunk costs

B. Avoidable costs

C. Committed costs

D. Opportunity costs

E. Notional costs

ANSWER: B D

Explanation:

Relevant costs are future cash flows that differ between the available decision alternatives. **Avoidable costs** meet this definition because they will be eliminated if a particular activity, product, contract, or department is not selected. The amount that can be avoided is therefore an incremental cash-flow consequence of the decision and must be included in the comparison.

Opportunity costs are also relevant. They represent the benefit or contribution forgone when a scarce resource is used for one purpose rather than its best alternative use. For example, accepting a special order may consume capacity that could otherwise earn contribution from normal production. Although an opportunity cost may not create an external cash payment, it is a genuine economic sacrifice arising in the future and differs according to the choice made, so it is included in short-term decision analysis.

This treatment follows the CIMA approach to decision making, which focuses on incremental cash flows and the value of scarce resources. CIMA's management accounting syllabus includes relevant costing and short-term decisions as core technical topics; see the CIMA Professional Qualification syllabus. The principles of identifying relevant future costs and opportunity costs are also explained in the OpenStax discussion of relevant costs for decision-making.

QUESTION NO: 28

A project has five possible outcomes as follows:

Contribution $000	Probability
65	0.4
68	
71	0.2
72	0.1
75	

The probability of a contribution of $68,000 is equal to the probability of a contribution of $75,000. Fixed costs are $70,000.

What is the probability of the project making a profit?

A. 0.45

ANSWER: A

Explanation:

The correct probability is **0.45**. A project makes a profit when its total contribution exceeds its fixed costs. Since fixed costs are $70,000, the relevant outcomes are all of the contribution amounts in the distribution that are greater than $70,000; an outcome equal to or below $70,000 does not produce a profit.

To complete the probability distribution, use the fundamental rule that the probabilities of all mutually exclusive possible outcomes must total 1.00. The stated equality between the probabilities for contributions of $68,000 and $75,000 allows the missing probability to be determined from the probabilities displayed in the outcome table. Once the distribution is complete, add the probabilities associated with every contribution outcome above $70,000. This produces a total probability of 0.45.

This is an application of probability distributions in management accounting: first establish a valid distribution, then identify the outcomes matching the decision criterion, here a positive profit. CIMA's professional qualification syllabus includes the application of probability and uncertainty to management-accounting decisions; see the CIMA Professional Qualification overview and the CIMA syllabus resources.

QUESTION NO: 29

A company sells two products, X and Y, which are always sold in the same ratio.

No inventories are held.

The following budgeted data relate to month 10:

	Product X	Product Y	Total
Contribution per unit	$15	$12	
Sales units	1,000	5,000	6,000
Fixed costs			$67,500

What is the budgeted margin of safety in month 10?

A. 600 units

B. 5,400 units

C. 1,000 units

D. 5,000 units

ANSWER: A

Explanation:

600 units is the budgeted margin of safety. Because X and Y are invariably sold in a fixed ratio, they must be treated as a single composite product for cost–volume–profit analysis. The contribution earned from one composite sales bundle is calculated from the budgeted selling prices, variable costs and required mix. Fixed costs are then divided by this weighted composite contribution to establish break-even sales in composite units. The budgeted sales volume is compared with that break-even volume, and the difference is the margin of safety. Using the month 10 budget data, the planned volume exceeds break-even volume by 600 units. Since no inventories are held, budgeted production and budgeted sales are the same; therefore, no inventory adjustment is needed when applying the calculation. Margin of safety is a measure of the amount by which planned activity can fall before the business reaches break-even, rather than a measure of total planned sales or break-even sales themselves. This approach is consistent with CIMA P1's coverage of cost–volume–profit analysis, including break-even analysis where a constant sales mix applies. See the CIMA Professional Qualification syllabus and the CIMA Professional Qualification overview.

QUESTION NO: 30

RT produces two products from different quantities of the same resources using a just-in-time (JIT) production system. The selling price and resource requirements of each of the products are shown below:

Product	R	T
Unit selling price ($)	130	160
Resources per unit: Direct labour ($8 per hour)	3 hours	5 hours
Material A ($3 per kg)	5 kgs	4 kgs
Material B ($7 per litre)	2 litres	1 litre
Machine hours ($10 per hour)	3 hours	4 hours

Market research shows that the maximum demand for products R and T during June 2010 is 500 units and 800 units respectively. This does not include an order that RT has agreed with a commercial customer for the supply of 250 units of R and 350 units of T at selling prices of $100 and $135 per unit respectively. Although the customer will accept part of the order, failure by RT to deliver the order in full by the end of June will cause RT to incur a $10,000 financial penalty. At a recent meeting of the purchasing and production managers to discuss the production plans of RT for June, the following resource restrictions for June were identified: Direct labour hours 7,500 hours

Material A 8,500 kgs

Material B 3,000 litres

Machine hours 7,500 hours

(Refer to previous 2 questions.)

You have now presented your optimum production plan to the purchasing and production managers of RT. During your presentation it became clear that the predicted resource restrictions were rather optimistic. In fact, the managers agreed that the availability of all of the resources could be as much as 10% lower than their original predictions.

Assuming that RT completes the order with the commercial customer, and using linear programming, show the optimum production plan for RT for June 2010 on the basis that the availability of all resources is 10% lower than originally predicted.

A. The optimal plan is to produce 550 units of Product R and 650 units of product T in addition to the contract.

B. The optimal plan is to produce 520 units of Product R and 620 units of product T in addition to the contract.

C. The optimal plan is to produce 510 units of Product R and 720 units of product T in addition to the contract.

D. The optimal plan is to produce 560 units of Product R and 670 units of product T in addition to the contract.

E. The optimal plan is to produce 450 units of Product R and 690 units of product T in addition to the contract.

F. The optimal plan is to produce 500 units of Product R and 550 units of product T in addition to the contract.

ANSWER: F

Explanation:

The optimal plan is to produce 500 units of Product R and 550 units of product T in addition to the contract. The resource limits must first be reduced by 10%, giving available June capacity of 6,750 direct-labour hours, 7,650 kg of Material A, 2,700 litres of Material B and 6,750 machine hours. Because completion of the commercial order is assumed, its 250 units of R and 350 units of T are treated as committed production and the resources required for those units are deducted before optimising the remaining output.

The linear-programming model then maximises the contribution from the remaining sales, subject to the residual resource constraints and the market-demand limits. The $10,000 penalty does not need to be modelled as a marginal decision cost in this version of the problem: completing the contract makes its avoidance certain. Solving the constrained model gives the corner-point solution of 500 additional units of R and 550 additional units of T. The 500-unit amount for R also exactly meets its separate non-contract market limit. Thus, total June production, including the commercial order, is 750 units of R and 900 units of T.

This applies the management-accounting principle of optimising contribution when several scarce resources constrain output, using linear-programming constraints for resource availability and demand. See CIMA's management accounting resources and the linear-programming methodology outlined by OpenStax.

QUESTION NO: 31

A company uses a standard labour rate of $15 per hour.

During the period, employees worked 9,200 hours and were paid $16 per hour.

What is the labour rate variance for the period?

A. $9,200 favourable

B. $9,200 adverse

C. $13,800 favourable

D. $13,800 adverse

ANSWER: B

Explanation:

The labour rate variance is **$9,200 adverse**. The variance compares the actual hourly rate paid with the standard hourly rate, multiplied by actual hours worked: ($16 - $15) × 9,200 hours = $9,200 adverse.

The variance is adverse because the actual rate exceeded the standard rate. Actual hours are used because the rate variance measures the cost effect of paying a different hourly rate for the hours actually worked. Labour efficiency is measured separately by comparing actual hours with standard hours allowed for actual output. See ACCA's standard costing guidance.

QUESTION NO: 32

A company makes and sells three products A, B and C.

The selling prices and costs of the three products, using a traditional absoprtion costing system, are shown in the table below.

The company has undertaken an analysis of overhead costs using activity-based costing (ABC).

The revised overhead costs for products A, B and C are $6, $32 and $55 respectively.

When comparing the figures obtained under the two costing methods, which of the following statements are true?

Select ALL that apply.

A. Product B makes a profit under both methods, but the profit is lower using ABC.

B. The product that is the most profitable under traditional absorption costing makes a loss under the ABC methodology.

C. Product C is currently overpriced based on cost plus pricing and the selling price should be reduced.

D. Activity-based costing results in a lower level of overhead costs for the company.

E. Product A shows a profit under ABC but had appeared loss making under traditional absorption costing.

ANSWER: A B E

Explanation:

“Product B makes a profit under both methods, but the profit is lower using ABC” is correct because the ABC overhead assigned to Product B is $32. This revised allocation reduces its reported margin compared with the traditional absorption-cost result, but does not eliminate the product’s profit. “The product that is the most profitable under traditional absorption costing makes a loss under the ABC methodology” is also correct. The activity analysis assigns substantially more overhead to that product under ABC, changing the cost and profit assessment from the traditional result to an ABC loss. Finally, “Product A shows a profit under ABC but had appeared loss making under traditional absorption costing” is correct because ABC assigns only $6 of overhead to Product A. Its lower activity-based overhead charge restores a positive product margin. These comparisons illustrate ABC’s purpose: it traces overhead to products through the activities that drive resource consumption, rather than relying solely on broad volume-based absorption. Consequently, ABC can materially change reported product profitability while providing managers with a more decision-useful view of the resources each product consumes. This is consistent with the CIMA qualification’s management-accounting focus on using relevant cost information for planning and decision-making; see CIMA Professional Qualification and the ACCA overview of activity-based costing.

QUESTION NO: 33

A company manufactures headphones.

70% of production costs are prime costs. Production overhead costs are driven by the number of headphones produced.

Which costing system would be most appropriate for product profitablilty analysis?

A. Absorption costing

B. Marginal costing

C. Activity based costing

D. Relevant costing

ANSWER: A

Explanation:

Absorption costing is the most appropriate system for this product-profitability analysis. It assigns all production costs to the headphones, including direct materials, direct labour and production overheads. Consequently, the reported cost per unit represents the full manufacturing cost needed to produce each headphone, providing an appropriate basis for assessing the profitability of the product after its manufacturing resources have been consumed.

The facts support using a conventional volume-related overhead absorption approach. Prime costs account for 70% of production cost, so overheads form a relatively limited proportion of total cost. More importantly, production overheads are driven by the number of headphones produced. A volume measure, such as units produced, is therefore a suitable cost

driver for absorbing overhead into products. This creates a clear cause-and-effect relationship between output and the overhead charged to each unit.

Absorption costing is also consistent with the principle that fixed and variable production overheads should be allocated systematically to manufactured inventory and included in the cost of sales when units are sold. IAS 2 describes this treatment of production overheads: IFRS Foundation — IAS 2 Inventories. CIMA's management accounting qualification similarly covers the use of costing information to support product and performance decisions: CIMA Professional Qualification.

QUESTION NO: 34

The marketing director of a company is deciding which of three products to launch into a new market.

The following table of possible outcomes has been prepared.

	Market condition		Expected value of profit
	Poor	Good	$m
Probability	0.4	0.6	
Product	$m	$m	
J	90	120	108
K	60	150	114
L	70	140	112

What is the value of perfect information about market conditions?

Give your answer as a whole number to the nearest $ million.

A. $12million

ANSWER: A

Explanation:

$12million is the value of perfect information. Perfect information would reveal the market condition before the launch decision is made. The marketing director could therefore select the product with the highest payoff for each individual market condition, rather than committing now to one product while uncertainty remains. To calculate its value, first identify the best available payoff in each market-condition column of the table. Multiply each of those conditional best payoffs by the probability of the relevant market condition and add the results. This produces the expected value with perfect information. Next, calculate the expected monetary value for each product without additional information and select the highest of those expected values. The value of perfect information is the difference between these two expected values. Applying the probabilities and outcomes in the table gives an incremental expected benefit of $12 million, rounded to the requested whole $ million. This approach reflects the decision-making techniques assessed in CIMA Management Accounting, including expected values and information value. CIMA's qualification framework is available from AICPA & CIMA; further guidance on expected-value decision analysis is provided by OpenStax.

QUESTION NO: 35

Which THREE of the following are purposes of all budgets?

A. Co-ordination

B. Communication

C. Profit maximisation

D. Diversification

E. Authorization

F. Consolidation

ANSWER: A B E

Explanation:

Budgets provide a formal, quantified plan that links operational activity and resource use to an organisation's objectives. **Co-ordination** is a core purpose because a budget brings together interdependent plans from functions such as sales, production, purchasing and administration. This helps ensure that one area's planned activity is workable in light of another area's capacity and resource requirements.

Communication is also fundamental: the budget communicates agreed priorities, expected activity levels, resource limits and financial targets to the managers responsible for delivering them. A documented budget makes expectations explicit and provides a common basis for action throughout the budget period.

Authorization is achieved because approved budgets normally set the authority to incur expenditure, commit resources and carry out planned activities within defined limits. Managers can use the approved budget as authority for routine spending and operational decisions, while material deviations may require further approval. These purposes support effective planning and control by aligning people, resources and decisions with organisational goals. CIMA's syllabus includes planning, budgeting and control as central management-accounting capabilities; see the CIMA Professional Qualification syllabus and the Global Management Accounting Principles.

QUESTION NO: 36

The standard production cost of making a product is as follows:

Production	**17,000 units**
Labour cost	$350,000 for 25,000 hours
Fixed production overheads	$156,000

What is the fixed production overhead capacity variance?

A. $9,000F

B. $6,000F

C. $3,000F

D. $6,000A

ANSWER: B

Explanation:

$6,000F is the fixed production overhead capacity variance. A fixed-overhead capacity variance measures the effect of using a different number of production hours from the budgeted capacity hours, valued at the standard fixed-overhead absorption rate per hour. It is calculated as: standard fixed-overhead rate × (budgeted capacity hours − actual hours worked). The production information shows that the actual productive capacity used exceeded the budgeted capacity by the relevant number of hours. Applying the fixed-overhead absorption rate to that excess capacity produces a variance of $6,000. Because more hours were available for absorbing fixed production overhead than had been budgeted, the fixed cost is

spread across a greater level of activity; this is favourable. The result is specifically a capacity effect, rather than an efficiency effect: capacity concerns the quantity of hours worked or available, while efficiency compares actual hours with the hours that should have been required for actual output. This distinction is central to standard-costing variance analysis and supports management in identifying whether fixed-overhead recovery changed because of resource utilisation or operational performance. CIMA's Management Accounting syllabus covers the use and interpretation of budgetary-control and variance-analysis techniques; see CIMA Study Hub. Further guidance on fixed-overhead variances is available from ACCA's standard costing guidance.

QUESTION NO: 37

JRL manufactures two products from different combinations of the same resources. Unit selling prices and unit cost details for each product are as follows:

Product	*J*	*L*
	$/unit	*$/unit*
Selling price	115	120
Direct material A ($10 per kg)	20	10
Direct material B ($6 per kg)	12	24
Skilled labour ($14 per hour)	28	21
Variable overhead ($4 per machine hour)	14	18
Fixed overhead*	28	36
Profit	13	11

*Fixed overhead is absorbed using an absorption rate per machine hour. It is an unavoidable central overhead cost that is not affected by the mix or volume of products produced.

The maximum weekly demand for products J and L is 400 units and 450 units respectively and this is the normal weekly production volume achieved by JRL. However, for the next four weeks the achievable production level will be reduced due to a shortage of available resources. The resources that are expected to be available are as follows:

Direct material A	900 kg
Direct material B	1,750 kg
Skilled labour	1,250 hours
Machine time	2,400 machine hours

* Refer to your answer in the previous question.

The optimal solution to the previous question shows that the shadow prices of skilled labour and direct material A are as follows:

Skilled labour $ Nil Direct Material A $11.70

Explain the relevance of these values to the management of JRL.

Select ALL the true statements.

A. The shadow price equals the additional contribution that would be earned from one extra unit of a scarce resource.

B. In a situation such as this, where a number of resources are scarce, the shadow price of any particular scarce resource will depend on whether or not the resource is not binding.

C. The shadow price for skilled labour is NIL because although there is a shortage of skilled labour it does have a constraining effect on output of JR as other resources are more scarce.

D. Since material A is one of the binding constraints, if the availability of material A could be increased by one unit, this would change the optimal plan.

E. The decrease in contribution as a result of this change is the value of the shadow price of material A. The shadow price thus represents the maximum premium that should be paid for an additional unit of material A.

ANSWER: A D

Explanation:

The shadow price equals the additional contribution that would be earned from one extra unit of a scarce resource. In linear programming, a shadow price measures the marginal improvement in the objective function resulting from relaxing a constraint by one unit, provided the change remains within the relevant allowable range. Therefore, the $11.70 shadow price means that one additional unit of direct material A would increase JRL's maximum contribution by $11.70. It is consequently a useful decision-making value when considering a short-term purchase of extra material A: JRL could pay up to this amount above its normal relevant cost, subject to the validity of the existing model and its assumptions.

Since material A is one of the binding constraints, if the availability of material A could be increased by one unit, this would change the optimal plan. A binding constraint is fully used at the optimum and restricts the attainable contribution. The positive $11.70 value confirms that material A is constraining the current optimum, so a marginal increase permits a more profitable production solution. Shadow prices are central to the limiting-factor and linear-programming techniques assessed within management accounting decision-making; see the CIMA Professional Qualification overview and the linear-programming explanation in OpenStax.

QUESTION NO: 38

Company NBO is providing a quote to manufacture 500 passenger seats for a bus company.

Relevant cost is being used as the basis for the quote.

Which THREE of the following should be included as relevant costs or savings in the production of the 500 passenger seats?

A. Equipment depreciation of $2,000 for the time the passenger seats are in production.

B. Electricity charges of $1,500 for the completion of the order.

C. Administration overheads of $3,200 apportioned on the basis of labour hours in production.

D. Seat cover material, to be bought for $6,000, which cannot be used on other products.

E. Idle time pay of $1,000 which would be paid to workers if the quote is not accepted

F. $750 paid for a consultant's advice on quoting for the order.

ANSWER: B D E

Explanation:

Relevant costing for a quotation considers only future cash flows that change if the order is accepted, including incremental expenditure and cash savings arising from undertaking the work. "Electricity charges of $1,500 for the completion of the order." is a directly attributable future cost of completing the specific order, so it affects the minimum price NBO should quote. "Seat cover material, to be bought for $6,000, which cannot be used on other products." is also an incremental purchase required solely for this contract. Its full purchase cost is therefore relevant to the decision because accepting the order creates that cash outflow.

"Idle time pay of $1,000 which would be paid to workers if the quote is not accepted" represents an avoidable cash cost: if the work is accepted, the employees can use the otherwise idle time to manufacture the seats and NBO avoids paying for idle time. The avoided payment is a relevant saving and should reduce the net relevant cost of accepting the order. This application is consistent with the relevant-cost principle that decision-making should focus on future cash flows and opportunity costs that differ between alternatives. See ACCA's guidance on relevant costs and the CIMA Professional Qualification syllabus.