

6. Detailed study guide

A The nature, source and purpose of management information

1. Accounting for management

- a) Describe the purpose and role of cost and management accounting within an organisation.^[K]
- b) Compare and contrast financial accounting with cost and management accounting.^[K]
- c) Outline the managerial processes of planning, decision-making and control.^[K]
- d) Explain the difference between strategic, tactical and operational planning.^[K]
- e) Distinguish between data and information.^[K]
- f) Identify and explain the attributes of good information.^[K]
- g) Explain the limitations of management information in providing guidance for managerial decision-making.^[K]

2. Sources of data

- a) Describe the three main data sources: machine/sensor, transactional and human/social.^[K]
- b) Describe sources of information from within and outside the organisation (including government statistics, financial press, professional or trade associations, quotations and price lists).^[K]
- c) Explain the uses and limitations of published information/data (including information from the internet).^[K]
- d) Identify the direct and indirect data capture costs of management accounting information.^[K]

3. Cost classification

- a) Explain and illustrate production and non-production costs.^[K]
- b) Describe the different elements of non-production costs - administrative, selling, distribution and finance.^[K]
- c) Describe the different elements of production costs - materials, labour and overheads.^[K]
- d) Explain the importance of the distinction between production and non-production costs when valuing output and inventories.^[K]
- e) Explain and illustrate with examples classifications used in the analysis of product/service costs including by function, direct and indirect, fixed and variable, stepped fixed and semi variable costs.^[S]
- f) Explain and illustrate the use of codes in categorising transactions.^[K]
- g) Identify and interpret graphical representations of different types of cost behaviour.^[S]
- h) Explain and illustrate the concept of cost objects, cost units and cost centres.^[S]
- i) Distinguish between cost, profit, investment and revenue centres.^[K]
- j) Describe the differing needs for information of cost, profit, investment and revenue centre managers.^[K]

4. Presenting information

- a) Prepare written reports representing management information in suitable formats according to purpose.^[S]
- b) Use data visualisation to present information using tables, charts and graphs (bar charts, line graphs, pie charts and scatter graphs).^[S]

- c) Interpret information (including tables, charts and graphs) presented in management reports.^[S]

B Data analysis and statistical techniques

1. Sampling methods

- a) Explain sampling techniques (random, systematic, stratified, multistage, cluster and quota).^[K]
- b) Choose an appropriate sampling method in a specific situation.^[S]
(Note: Derivation of random samples will not be examined)

2. Analytical techniques in budgeting and forecasting

- a) Explain the structure of linear functions and equations.^[S]
- b) Use the high low method to separate the fixed and variable elements of total costs including situations involving semi variable and stepped fixed costs and changes in the variable cost per unit.^[S]
- c) Explain the advantages and disadvantages of using the high low method to estimate the fixed and variable elements of costing.^[K]
- d) Construct scatter diagrams and lines of best fit.^[S]
- e) Analysis of cost data.
(i) Explain the concepts of correlation coefficient and coefficient of determination.^[K]
(ii) Calculate and interpret the correlation coefficient and the coefficient of determination.^[S]
(iii) Establish a linear function using regression analysis and interpret the results.^[S]
- f) Use linear regression coefficients to make forecasts of costs and revenues.^[S]
- g) Adjust historical and forecast data for price movements.^[S]

- h) Explain the advantages and disadvantages of linear regression analysis.^[K]

- i) Explain the principles of time series analysis (cyclical, trend, seasonal variation and random elements).^[K]

- j) Calculate moving averages.^[S]

- k) Calculate the trend, including the use of regression coefficients.^[S]

- l) Use trend and seasonal variation (additive and multiplicative) to make budget forecasts.^[S]

- m) Explain the advantages and disadvantages of time series analysis.^[K]

- n) Explain the purpose of index numbers.^[K]

- o) Calculate simple and multi-item (weighted) index numbers for one or more variables, including Laspeyre and Paasche indices.^[S]

- p) Describe the product life cycle and explain its importance in forecasting.^[K]

3. Summarising and analysing data

- a) Describe the five characteristics of big data (volume, variety, velocity, value and veracity).^[K]
- b) Explain the three types of big data: structured, semi-structured and unstructured.^[K]
- c) Describe the main uses of big data and data analytics for organisations.^[K]
- d) Describe the two types of data: categorical (nominal and ordinal) and numerical (continuous and discrete).^[S]
- e) Explain the terms descriptive analysis and inferential analysis.^[K]
- f) Calculate the mean, mode and median for ungrouped data and the mean for grouped data.^[S]

- g) Calculate measures of dispersion including the variance, standard deviation and coefficient of variation both grouped and ungrouped data.^[S]
- h) Calculate expected values for use in decision making.^[S]
- i) Explain the properties of a normal distribution.^[S]
- j) Interpret normal distribution graphs and tables.^[S]
- (ix) Calculate the value of closing inventory and material issues using LIFO, FIFO and average methods.^[S]
- (x) Explain Just in Time (JIT) as an inventory management approach.^[K]

4. Spreadsheets

- a) Explain the role and features of a computer spreadsheet system.^[K]
- b) Identify applications for computer spreadsheets and their use in data analysis, cost and management accounting.^[S]

C Cost accounting techniques

1. Accounting for material, labour and overheads

- a) Accounting for materials
 - (i) Describe the systems necessary for the ordering, receiving and issuing of materials from inventory.^[K]
 - (ii) Describe the control procedures used to monitor physical and 'book' inventory and to minimise discrepancies and losses.^[K]
 - (iii) Interpret the entries and balances in the material inventory account.^[S]
 - (iv) Identify, explain and calculate the costs of ordering and holding inventory (including buffer inventory).^[S]
 - (v) Calculate and interpret optimal reorder quantities.^[S]
 - (vi) Calculate and interpret optimal reorder quantities when discounts apply.^[S]
 - (vii) Produce calculations to minimise inventory costs when inventory is gradually replenished.^[S]
 - (viii) Describe and apply appropriate methods for establishing reorder levels where demand in the lead time is constant.^[S]
- b) Accounting for labour
 - (i) Calculate direct and indirect costs of labour.^[S]
 - (ii) Explain the systems used to capture and record labour effort.^[K]
 - (iii) Prepare the journal and ledger entries to record labour cost inputs and outputs.^[S]
 - (iv) Describe different remuneration methods: time-based systems, piecework systems and individual and group incentive schemes.^[K]
 - (v) Calculate the level and analyse the costs and causes of labour turnover.^[S]
 - (vi) Explain and calculate labour efficiency, capacity and production volume ratios.^[S]
 - (vii) Interpret the entries in the labour account.^[S]
- c) Accounting for overheads
 - (i) Explain the different treatment of direct and indirect expenses.^[K]
 - (ii) Describe the procedures involved in determining production overhead absorption rates.^[K]
 - (iii) Allocate and apportion production overheads to cost centres using an appropriate basis.^[S]
 - (iv) Reapportion service cost centre costs to production cost centres (including using the reciprocal method where service cost centres work for each other).^[S]
 - (v) Select, apply and discuss appropriate bases for absorption rates.^[S]
 - (vi) Prepare journal and ledger entries for manufacturing overheads incurred and absorbed.^[S]
 - (vii) Calculate and explain the under and over absorption of overheads.^[S]

2. Absorption and marginal costing

- a) Explain the importance of, and apply, the concept of contribution.^[S]
- b) Demonstrate and discuss the effect of absorption and marginal costing on inventory valuation and profit determination.^[S]
- c) Calculate profit or loss under absorption and marginal costing.^[S]
- d) Reconcile the profits or losses calculated under absorption and marginal costing.^[S]
- e) Describe the advantages and disadvantages of absorption and marginal costing.^[K]

3. Cost accounting methods

- a) Job and batch costing:
 - (i) Describe the characteristics of job and batch costing.^[K]
 - (ii) Describe the situations where the use of job or batch costing would be appropriate.^[K]
 - (iii) Prepare cost records and accounts in job and batch costing situations.^[S]
 - (iv) Establish job and batch costs from given information.^[S]
- b) Process costing
 - (i) Describe the characteristics of process costing.^[K]
 - (ii) Describe the situations where the use of process costing would be appropriate.^[S]
 - (iii) Explain the concepts of normal and abnormal losses and abnormal gains.^[K]
 - (iv) Distinguish between by-products and joint products.^[K]
 - (v) Value by-products and joint products at the point of separation.^[S]
 - (vi) Evaluate the benefit of further processing.^[S]
- c) Service/operation costing
 - (i) Define the characteristics of service organisations.^[K]

- (ii) Identify situations where the use of service/operation costing is appropriate.^[K]
- (iii) Illustrate suitable unit cost measures that may be used in different service/operation situations.^[S]
- (iv) Carry out service cost analysis in simple service industry situations.^[S]

4 Alternative cost accounting principles

- a) Explain activity-based costing (ABC), target costing and life-cycle costing as alternative cost management techniques.^[K]
- b) Differentiate ABC, target costing and life cycle costing from the traditional costing techniques (note: calculations are not required).^[K]

D Budgeting

1. Nature and purpose of budgeting

- a) Explain why organisations use budgeting.^[K]
- b) Describe the planning and control cycle in an organisation.^[K]
- c) Explain the administrative procedures used in the budgeting process.^[K]
- d) Describe the stages in the budgeting process (including sources of relevant data, planning and agreeing draft budgets and purpose of forecasts and how they link to budgeting).^[K]

2. Budget preparation

- a) Explain the importance of the principal budget factor in constructing a budget.^[K]
- b) Prepare sales budgets.^[S]
- c) Prepare functional budgets (production, raw materials usage and purchases, labour, variable and fixed overheads).^[S]
- d) Prepare cash budgets.^[S]

- e) Prepare master budgets (statement of profit or loss and statement of financial position).^[S]
- f) Explain and illustrate 'what if' analysis and scenario planning.^[S]
- g) Describe the impact of the general economic environment on costs/revenue in budgeting.^[K]
- h) Explain the importance of considering sustainability in budget preparation.^[K]
- g) Identify and evaluate relevant cash flows for individual investment decisions.^[S]
- h) Explain and illustrate the net present value (NPV) and internal rate of return (IRR) methods of discounted cash flow.^[S]
- i) Calculate present value using annuity and perpetuity formulae.^[S]
- j) Calculate NPV, IRR and payback (discounted and non-discounted).^[S]

3. Flexible budgets

- a) Explain the importance of flexible budgets in control.^[K]
- b) Explain the disadvantages of fixed budgets in control.^[K]
- c) Identify situations where fixed or flexible budgetary control would be appropriate.^[S]
- d) Flex a budget to a given level of volume.^[S]

4. Asset budgeting and investment appraisal

- a) Discuss the importance of investment planning and control.^[K]
- b) Define and distinguish between asset and expense items.^[K]
- c) Outline the issues to consider and the steps involved in the preparation of an asset expenditure budget.^[K]
- d) Explain and illustrate the difference between simple and compound interest, and between nominal and effective interest rates.^[S]
- e) Explain and illustrate compounding and discounting.^[S]
- f) Explain the distinction between cash flow and profit and the relevance of cash flow to investment appraisal.^[K]

- k) Interpret the results of NPV, IRR and payback calculations of investment viability.^[S]

5. Budgetary control and reporting

- a) Calculate simple variances between flexed budget, fixed budget and actual sales, costs and profits.^[S]
- b) Discuss the relative significance of variances.^[K]
- c) Explain potential action to eliminate variances.^[K]
- d) Define the concept of responsibility accounting and its significance in control.^[K]
- e) Explain the concept of controllable and uncontrollable costs.^[K]
- f) Prepare control reports suitable for presentation to management (to include recommendation of appropriate control action).^[S]

6. Behavioural aspects of budgeting

- a) Explain the importance of motivation in performance management.^[K]
- b) Identify factors in a budgetary planning and control system that influence motivation.^[S]

- c) Explain the impact of targets on motivation.^[K]
- d) Discuss managerial incentive schemes.^[K]
- e) Discuss the advantages and disadvantages of a participative approach to budgeting.^[K]
- f) Explain top down and bottom up approaches to budgeting.^[K]

E Standard costing

1. Standard costing

- a) Explain the purpose and principles of standard costing.^[K]
- b) Explain and illustrate the difference between standard, marginal and absorption costing.^[K]
- c) Establish the standard cost per unit under absorption and marginal costing.^[S]

2 Variance calculations and analysis

- a) Calculate sales price and volume variance.^[S]
- b) Calculate materials total, price and usage variance.^[S]
- c) Calculate labour total, rate and efficiency variance.^[S]
- d) Calculate variable overhead total, expenditure and efficiency variance.^[S]
- e) Calculate fixed overhead total, expenditure and, where appropriate, volume, capacity and efficiency variance.^[S]
- f) Interpret the variances.^[S]
- g) Explain factors to consider before investigating variances, explain possible causes of the variances and recommend control action.^[S]

- h) Explain the interrelationships between the variances.^[K]
- i) Calculate actual or standard figures where the variances are given.^[K]

3 Reconciliation of budgeted and actual profit

- a) Reconcile budgeted profit with actual profit under standard absorption costing.^[S]
- b) Reconcile budgeted profit or contribution with actual profit or contribution under standard marginal costing.^[S]

F Performance measurement

1. Performance measurement - overview

- a) Discuss the purpose of mission statements and their role in performance measurement.^[K]
- b) Discuss the purpose of strategic, operational and tactical objectives and their role in performance measurement.^[K]
- c) Discuss the impact of economic and market conditions on performance measurement.^[K]
- d) Explain the impact of government regulation on performance measurement.^[K]
- e) Explain the impact of sustainability on performance measurement.^[K]

2 Performance measurement - application

- a) Discuss and calculate measures of financial performance (profitability, liquidity, efficiency and gearing) and non-financial measures.^[S]
- b) Perspectives of the Balanced Scorecard
 - (i) discuss the advantages and limitations of the balanced scorecard.^[K]

- (ii) describe performance indicators for financial, customer, internal business process and innovation and learning.^[K]
 - (iii) discuss critical success factors and key performance indicators and their link to objectives and mission statements.^[K]
 - (iv) establish critical success factors and key performance indicators in a specific situation.^[S]
- c) Economy, efficiency and effectiveness
- (i) explain the concepts of economy, efficiency and effectiveness.^[K]
 - (ii) describe performance indicators for economy, efficiency and effectiveness.^[K]
 - (iii) establish performance indicators for economy, efficiency and effectiveness in a specific situation.^[S]
 - (iv) discuss the meaning of each of the efficiency, capacity and activity ratios.^[K]
 - (v) calculate the efficiency, capacity and activity ratios in a specific situation.^[S]
- d) Resource utilisation
- (i) describe measures of performance utilisation in service and manufacturing environments.^[K]
 - (ii) establish measures of resource utilisation in a specific situation.^[S]
- e) Profitability
- (i) calculate return on investment and residual income.^[S]
 - (ii) explain the advantages and limitations of return on investment and residual income.^[K]
- f) Quality
- (i) distinguish performance measurement issues in service and manufacturing industries.^[K]
 - (ii) describe performance measures appropriate for service industries.^[K]
 - (iii) Explain total quality management (TQM) as a quality management technique.^[K]
- 3. Cost reductions and value enhancement**
- a) Compare cost control and cost reduction.^[K]
 - b) Describe and evaluate cost reduction methods.^[S]
 - c) Describe and evaluate value analysis.^[S]
- 4 Monitoring performance and reporting**
- a) Discuss the importance of non-financial performance measures.^[K]
 - b) Discuss the relationship between short-term and long-term performance.^[K]
 - c) Discuss the measurement of performance in service industry situations.^[K]
 - d) Discuss the measurement of performance in non-profit seeking and public sector organisations.^[K]
 - e) Discuss measures that may be used to assess managerial performance and the practical problems involved.^[K]
 - f) Discuss the role of benchmarking in performance measurement.^[K]
 - g) Produce reports highlighting key areas for management attention and recommendations for improvement.^[S]